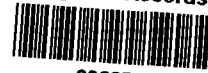


EPA Region 5 Records Ctr.



232875

STS CONSULTANTS, LTD.



**Completion Report
Time-Critical Removal Action
Lindsay Light II Site/
(OU3/North McClurg Court)
341 East Ohio Street
Chicago, Illinois**

Volume II - Appendices

STS Project No. 1-25585-XJ
December 31, 2002

Teachers' Retirement System of the State of Illinois



THE
INFRASTRUCTURE
IMPERATIVE

Appendix



APPENDIX A

Unilateral Administrative Order dated June 6, 1996, as amended by First Amendment dated March 29, 2000 and Action Memorandum Amendment dated March 1, 2001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 5

IN THE MATTER OF:

Lindsay Light II Site
Chicago, Illinois

Respondents:

The Chicago Dock & Canal Trust
Kerr-McGee Chemical Corporation

) Docket No. V-W- '96-C-353
)
) ADMINISTRATIVE ORDER
) PURSUANT TO SECTION 106(a)
) OF THE COMPREHENSIVE
) ENVIRONMENTAL RESPONSE,
) COMPENSATION, AND
) LIABILITY ACT OF 1980,
) AS AMENDED, 42 U.S.C.
) SECTION 9606(a)

I. JURISDICTION AND GENERAL PROVISIONS

This Order is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a), and delegated to the Administrator of the United States Environmental Protection Agency ("U.S. EPA") by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the Regional Administrators by U.S. EPA Delegation Nos. 14-14-A and 14-14-B, and to the Director, Superfund Division, Region 5, by Regional Delegation Nos. 14-14-A and 14-14-B.

This Order pertains to property located at 316 East Illinois Street, Chicago, Illinois (the "Lindsay Light II Site" or the "Site"). This Order requires the Respondents to conduct removal activities described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

U.S. EPA has notified the State of Illinois of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

This Order applies to and is binding upon Respondents and Respondents' heirs, receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondents' responsibilities under this Order. Respondents are jointly and severally liable for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondent with any provision of this Order shall not excuse or justify noncompliance by any other Respondent.

Respondents shall ensure that their contractors, subcontractors, and representatives comply with this Order. Respondents shall be responsible for any noncompliance.

III. FINDINGS OF FACT

Based on available information, including the Administrative Record in this matter, U.S. EPA hereby finds that:

1. The Lindsay Light II Site ("the Site" or "the Facility") is located at 316 East Illinois Street, Chicago, Cook County, Illinois. The Site is situated in an urban area called the Gold Coast, and is surrounded by commercial and residential buildings. A shopping mall is located approximately 200 feet to the southeast. The Chicago River is located 1 mile south of the Site, and Lake Michigan is about 1.5 miles east of the Site.
2. The Site is currently a parking lot operated by General Parking, and owned by the Chicago Dock and Canal Trust ("CDCT").
3. Until 1936, Lindsay Light manufactured incandescent gas mantels at 161 East Grand, which is .25 miles from the Site. It is unknown if they worked elsewhere; however, Sanborn maps from 1906 do show Lindsay Light being at other Chicago locations. During 1931-1936, the company moved its operations to West Chicago, Illinois.
4. The principal ingredient in gas mantle manufacture is thorium as a nitrate. Small amounts of cerium, beryllium and magnesium nitrates are also used. Thorium occurs principally as the parent radionuclide thorium-232 in association with its daughter products in a decay sequence known as the Thorium Decay Series. Thorium radionuclides are also found in the Uranium Decay Series and the Actinium Decay Series. It is believed that the principal source of contamination at this Site is the Thorium Decay Series.
5. It is unclear what Lindsay Light actually did at 316 East Illinois; however, records from The Chicago Dock and Canal Trust indicate this Site was a stable, and that Lindsay Light leased portions of the building from The Chicago Dock and Canal Trust from 1915-1933.
6. On June 3, 1993, U.S. EPA and the Illinois Department of Nuclear Safety conducted a joint investigation at the Site. This investigation verified the presence of radioactivity at levels clearly above natural background. Gamma readings were found as high as 280 uR/hr on a Ludlum Model 19 Micro-R meter. Background measured at the Site had gamma readings of 20 uR/hr.

7. The Chicago Dock and Canal Trust entered into an Administrative Order by Consent ("AOC") with U.S. EPA to study the extent of subsurface radiation and radionuclide content before excavation. The AOC was signed by U.S. EPA on January 27, 1994, and the extent of contamination ("EOC") study was completed by CDCT in May 1994. The final report concerning the extent of contamination was delivered to U.S. EPA on October 17, 1995, and was approved on March 13, 1996.
8. A brief summary of the final report approved by U.S. EPA on March 13, 1996, is as follows: 12 areas exhibit elevated gamma levels; the maximum contamination depth extends to 2.5 meters (8 feet) below the ground surface; and Resource Conservation and Recovery Act ("RCRA")-characteristic waste is not present on-site. The highest gamma level is 252 times above background, or 1.1 milliRoentgen per hour.
9. Activities completed at this Site, besides the extent of contamination study, have been the voluntary placement by CDCT of notices at the entrances to the parking lot informing patrons of the risks associated with the lot.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record supporting these removal actions, U.S. EPA determines that:

1. The Lindsay Light II Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
2. Radionuclides are "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
3. Each Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
4. Respondent The Chicago Dock & Canal Trust is the present "owner" and "operator" of the Lindsay Light II Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20). Respondent Kerr-McGee Chemical Corporation is a person who is the corporate successor of the Lindsay Light Company. The Lindsay Light Company was the operator of the Lindsay Light II Site at the time of disposal of any hazardous substances, or who arranged for disposal or transport for disposal of hazardous substances at the Lindsay Light II Site. Respondents are therefore liable persons under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

5. The conditions described in the Findings of Fact above constitute an actual or threatened "release" into the "environment" as defined by Sections 101(8) and (22) of CERCLA, 42 U.S.C. §§ 9601(8) and (22).

6. The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 CFR Part 300. These factors include, but are not limited to, the following:

a. actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants;

This factor is present at the Site due to the existence of a public parking lot on property found to have gamma readings measured as high as 1.1 milliRoentgen per hour. This reading is 252 times the background level measured for the Site.

Gamma rays are penetrating radiation indistinguishable from X-rays which can be absorbed by tissue in the human body, thereby increasing the cancer risk for the person exposed. The excess risk to a transient spending 29 minutes per day for a 250 day work year at the peak exposure spot is 10^{-4} . Transients were judged to be parking lot customers, people using the lot for a short cut, or temporary workers.

The Site is surrounded by two-foot high steel guardrails, which do not totally restrict access. Furthermore, there are two parking attendants stationed at this parking lot on a 24-hour basis to collect fees, although initial readings taken on June 3, 1993, indicate that there were no levels above background where the attendants are stationed. Again, such an exposure entails cancer risk that would have no personal or societal benefit. Direct measurement with survey instruments at the present parking lot attendant stations found background radiation levels which were confirmed with longer measurements using thermoluminescent dosimeters ("TLDs") placed in the ticket booths between June 3, 1993, and June 30, 1993. Conditions at the Site have not changed since the site assessment on June 3, 1993. There is no guarantee that the ticket booths could not be moved to the peak point of gamma readings at some future time, thereby introducing the potential for exposure and risk to be actualized.

The EOC study confirmed that elevated radioactivity levels are due to past industrial processes. The Site is also surrounded by commercial and residential buildings, whose occupants use this parking lot and adjacent sidewalks. Situated 200 feet southeast of the Site is the North Pier shopping mall.

b. high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

This factor is present at the Site due to the existence of elevated gamma exposure levels which validates subsurface deposits of radiological contaminants. The dominant concern is intrusion into these materials that will contaminate the intruder and their equipment and, further, lead to dispersal or spreading of the contaminants from their present locations. Such a scenario probably has arisen, and could again arise, with parking lot excavation where workers and their equipment are contaminated by radioactive soils, dry soil dispersed in the wind, and excavation spoils moved off-site. The number of people exposed could greatly increase and might include workers who subsequently use contaminated machinery, residents near the parking lot who might come in contact with wind dispersed soils, and use of excavation spoils. Such spreading could occur within downtown Chicago where the parking lot is located and out for several miles depending upon where workers reside and where spoils are used.

c. other situations or factors that may pose threats to public health or welfare or the environment;

This factor is present at the Site due to the property's planned future development. Such construction would entail excavating into potentially contaminated soils for placement of building footings and cause increased releases into the environment and human exposure to contaminants. Also, it has not been determined whether subsurface contaminants are soluble. If they are, there could be spreading via groundwater.

This Site appears to be gridded with sewer lines. These could be conduits for the spread of both soluble and insoluble materials off-site, for extension of the region of contamination, and for an increase in the potential for sewer workers to be exposed to contaminants.

7. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

8. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP and CERCLA.

V. ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, U.S. EPA hereby orders that Respondents perform the following actions:

1. Notice of Intent to Comply

Respondents shall notify U.S. EPA in writing within 3 business days after the effective date of this Order of Respondents' irrevocable intent to comply with this Order. Failure of each Respondent to provide such notification within this time period shall be a violation of this Order.

2. Designation of Contractor, Project Coordinator, and On-Scene Coordinator

Respondents shall perform the removal actions themselves or retain contractors to implement the removal actions. Respondents shall notify U.S. EPA of Respondents' qualifications or the name and qualifications of such contractors, whichever is applicable, within 10 business days of the effective date of this Order. Respondents shall also notify U.S. EPA of the name and qualifications of any other contractors or subcontractors retained to perform work under this Order at least 5 business days prior to commencement of such work. U.S. EPA retains the right to disapprove of the Respondents or any of the contractors and/or subcontractors retained by the Respondents. If U.S. EPA disapproves a selected contractor, Respondents shall retain a different contractor within 2 business days following U.S. EPA's disapproval and shall notify U.S. EPA of that contractor's name and qualifications within 3 business days of U.S. EPA's disapproval.

Within 10 business days after the effective date of this Order, the Respondents shall designate a Project Coordinator who shall be responsible for administration of all the Respondents' actions required by the Order and submit the designated coordinator's name, address, telephone number, and qualifications to U.S. EPA. To the greatest extent possible, the Project Coordinator shall be present on-site or readily available during site work. U.S. EPA retains the right to disapprove of any Project Coordinator named by the Respondents. If U.S. EPA disapproves a selected Project Coordinator, Respondents shall retain a different Project Coordinator within 3 business days following U.S. EPA's disapproval and shall notify U.S. EPA of that person's name and qualifications within 4 business days of U.S. EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from U.S. EPA relating to this Order shall constitute receipt by all Respondents.

The U.S. EPA has designated Verneta Simon of the Emergency Response Branch, Region 5, as its On-Scene Coordinator (OSC). Respondents shall direct all submissions required by this Order to the OSC at U.S. EPA, 77 West Jackson Boulevard, SE-5J, Chicago, Illinois, 60604-3590, by certified or express mail. Respondents shall also send a copy of all submissions to Nancy-Ellen Zusman, Assistant Regional Counsel, 77 West Jackson Boulevard, C-29A, Chicago, Illinois, 60604-3590. All Respondents are encouraged to make their submissions to U.S. EPA on recycled paper (which includes significant postconsumer waste paper content where possible) and using two-sided copies.

3. Work to Be Performed

Respondents shall perform, at a minimum, the following response activities:

- a. Develop and implement a Site Health and Safety Plan.
- b. Develop and implement Site security measures.
- c. Develop and implement an air monitoring program.
- d. Remove contamination until the cleanup criterion of 5 picoCuries per gram total radium (radium-226 + radium-228) over background is achieved. This cleanup criterion will be met in each 15 centimeter layer below the surface. Averaging over areas up to 100 square meters will be allowed, but only after reasonable efforts have been made to achieve levels As Low As Reasonably Achievable ("ALARA"). It is not U.S. EPA's intent to leave any elevated areas of contamination if at all possible.
- e. Establish local background for radium-226 and radium-228 from four soil samples taken on the property at points where the gamma exposure rates are lowest plus eight soil samples taken off-site, but in the immediate vicinity, of the parking lot.
- f. Transport and dispose of all characterized or identified hazardous substances, pollutants, wastes, or contaminants at a RCRA/CERCLA/IDNS-approved disposal facility in accordance with the U.S. EPA off-site policy.
- g. Conduct off-site surveying and sampling as necessary and, at a minimum, implement the standards of 40 Code of Federal Regulations ("CFR") 192, if deemed necessary should contamination be discovered beyond current site boundaries.

- h. Backfill all excavations with suitable material, and if soil, test borrow source for radioactivity and other pertinent characteristics in 40 CFR Part 261.

3.1 Work Plan and Implementation

Within 15 calendar days after the effective date of this Order, the Respondents shall submit to U.S. EPA for approval a draft Work Plan for performing the removal activities set forth above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the activities required by this Order.

U.S. EPA may approve, disapprove, require revisions to, or modify the draft Work Plan. If U.S. EPA requires revisions, Respondents shall submit a revised draft Work Plan within 7 business days of notification. Respondents shall implement the Work Plan as finally approved in writing by U.S. EPA in accordance with the schedule approved by U.S. EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondents shall notify U.S. EPA at least 48 hours prior to performing any on-site work pursuant to the U.S. EPA approved work plan.

Respondents shall not commence or undertake any removal actions at the Site without prior U.S. EPA approval.

3.2 Health and Safety Plan

Within 15 calendar days after the effective date of this Order, the Respondents shall submit a plan for U.S. EPA review and comment that ensures the protection of the public health and safety during performance of on-site work under this Order. This plan shall comply with applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 CFR Part 1910. If U.S. EPA determines it is appropriate, the plan shall also include contingency planning. Respondents shall incorporate all changes to the plan recommended by U.S. EPA, and implement the plan during the pendency of the removal action.

3.3 Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to U.S. EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with U.S. EPA guidance. Upon request by U.S. EPA, Respondents shall have such a laboratory analyze samples submitted by U.S. EPA for quality assurance monitoring. Respondents shall provide to U.S. EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or

analysis. Respondents shall also ensure provision of analytical tracking information consistent with OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites."

Upon request by U.S. EPA, Respondents shall allow U.S. EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents or their contractors or agents while performing work under this Order. Respondents shall notify U.S. EPA not less than 3 business days in advance of any sample collection activity. U.S. EPA shall have the right to take any additional samples that it deems necessary.

3.4 Reporting

Respondents shall submit a monthly written progress report to U.S. EPA concerning activities undertaken pursuant to this Order, beginning 30 calendar days after the date of U.S. EPA's approval of the Work Plan, until termination of this Order, unless otherwise directed by the OSC. These reports shall describe all significant developments during the preceding period, including the work performed and any problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

Any Respondent that owns any portion of the Site, and any successor in title shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice of this Order to the transferee and written notice of the proposed conveyance to U.S. EPA and the State. The notice to U.S. EPA and the State shall include the name and address of the transferee. The party conveying such an interest shall require that the transferee will provide access as described in Section V.4 (Access to Property and Information).

3.5 Final Report

Within 60 calendar days after completion of all removal actions required under this Order, the Respondents shall submit for U.S. EPA review a final report summarizing the actions taken to comply with this Order. The final report shall conform to the requirements set forth in Section 300.165 of the NCP. The final report shall also include a good faith estimate of total costs incurred in complying with the Order, a listing of quantities and types of materials removed, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destinations of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits).

The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete.

4. Access to Property and Information

Respondents shall provide or obtain access as necessary to the Site and all appropriate off-site areas, and shall provide access to all records and documentation related to the conditions at the Site and the activities conducted pursuant to this Order. Such access shall be provided to U.S. EPA employees, contractors, agents, consultants, designees, representatives, and State of Illinois representatives. These individuals shall be permitted to move freely at the Site and appropriate off-site areas in order to conduct activities which U.S. EPA determines to be necessary. Respondents shall submit to U.S. EPA, upon request, the results of all sampling or tests and all other data generated by Respondents or their contractors, or on the Respondents' behalf during implementation of this Order.

Where work under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall obtain all necessary access agreements within 14 calendar days after the effective date of this Order, or as otherwise specified in writing by the OSC. Respondents shall immediately notify U.S. EPA if, after using their best efforts, they are unable to obtain such agreements. Respondents shall describe in writing their efforts to obtain access. U.S. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response activities described herein, using such means as U.S. EPA deems appropriate.

5. Record Retention, Documentation, Availability of Information

Respondents shall preserve all documents and information, in their possession or the possession of their contractors, subcontractors or representatives, relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years following completion of the removal actions required by this Order. At the end of this six year period and at least 60 days before any document or information is destroyed, Respondents shall notify U.S. EPA that such documents and information are available to U.S. EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to U.S. EPA. In addition, Respondents shall provide documents and information retained under this Section at any time before expiration of the six year period at the written request of U.S. EPA.

6. Off-Site Shipments

All hazardous substances, pollutants or contaminants removed off-site pursuant to this Order for treatment, storage or disposal shall be treated, stored, or disposed of at a RCRA/CERCLA/IDNS-approved disposal facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 CFR § 300.440, 58 Federal Register 49215 (Sept. 22, 1993).

7. Compliance With Other Laws

All actions required pursuant to this Order shall be performed in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA Section 121(e) and 40 CFR Section 300.415(i). In accordance with 40 CFR Section 300.415(i), all on-site actions required pursuant to this Order shall, to the extent practicable, as determined by U.S. EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws.

8. Emergency Response and Notification of Releases

If any incident, or change in Site conditions, during the activities conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondents shall immediately take all appropriate action to prevent, abate or minimize such release, or endangerment caused or threatened by the release. Respondents shall also immediately notify the OSC or, in the event of his/her unavailability, shall notify the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or Site conditions.

Respondents shall submit a written report to U.S. EPA within 7 business days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. Respondents shall also comply with any other notification requirements, including those in CERCLA Section 103, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. § 11004.

VI. AUTHORITY OF THE U.S. EPA ON-SCENE COORDINATOR

The OSC shall be responsible for overseeing the implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any work required by this Order, or to direct any other response action

undertaken by U.S. EPA or Respondents at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

U.S. EPA and Respondents shall have the right to change their designated OSC or Project Coordinator. U.S. EPA shall notify the Respondents, and Respondents shall notify U.S. EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. Notification may initially be made orally, but shall be followed promptly by written notice.

VII. PENALTIES FOR NONCOMPLIANCE

Violation of any provision of this Order may subject Respondents to civil penalties of up to \$25,000 per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1).

Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion hereof, U.S. EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

VIII. REIMBURSEMENT OF COSTS

Respondents shall reimburse U.S. EPA, upon written demand, for all response costs incurred by the United States in overseeing Respondents' implementation of the requirements of this Order. U.S. EPA may submit to Respondents on a periodic basis a bill for all response costs incurred by the United States with respect to this Order. U.S. EPA's Itemized Cost Summary, or such other summary as certified by U.S. EPA, shall serve as the basis for payment.

Respondents shall, within 30 days of receipt of the bill, remit a cashier's or certified check for the amount of those costs made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Respondents shall simultaneously transmit a copy of the check to the Director, Superfund Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois, 60604-3590. Payments shall be

designated as "Response Costs - Lindsay Light II Site" and shall reference the payors' names and addresses, the U.S. EPA site identification number (YT), and the docket number of this Order.

Interest at a rate established by the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4 CFR § 102.13 shall begin to accrue on the unpaid balance from the day after the expiration of the 30 day period notwithstanding any dispute or an objection to any portion of the costs.

IX. RESERVATION OF RIGHTS

Nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this Order. U.S. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

X. OTHER CLAIMS

By issuance of this Order, the United States and U.S. EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or U.S. EPA shall not be a party or be held out as a party to any contract entered into by the Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

This Order does not constitute a pre-authorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

XI. MODIFICATIONS

Modifications to any plan or schedule may be made in writing by the OSC or at the OSC's oral direction. If the OSC makes an oral modification, it will be memorialized in writing within 7 business days; however, the effective date of the modification shall be the date of the OSC's oral direction. The rest of the Order, or any other portion of the Order, may only be modified in writing by signature of the Director, Superfund Division, Region 5.

If Respondents seek permission to deviate from any approved plan or schedule, Respondents' Project Coordinator shall submit a written request to U.S. EPA for approval outlining the proposed modification and its basis.

No informal advice, guidance, suggestion, or comment by U.S. EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of their obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

XII. NOTICE OF COMPLETION

After submission of the Final Report, Respondents may request that U.S. EPA provide a Notice of Completion of the work required by this Order. If U.S. EPA determines, after U.S. EPA's review of the Final Report, that all work has been fully performed in accordance with this Order, except for certain continuing obligations required by this Order (e.g., record retention), U.S. EPA will provide written notice to the Respondents. If U.S. EPA determines that any removal activities have not been completed in accordance with this Order, U.S. EPA will notify the Respondents, provide a list of the deficiencies, and require that Respondents modify the Work Plan to correct such deficiencies. The Respondents shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the U.S. EPA notice. Failure to implement the approved modified Work Plan shall be a violation of this Order.

XIII. ACCESS TO ADMINISTRATIVE RECORD

The Administrative Record supporting these removal actions is available for review during normal business hours in the U.S. EPA Record Center, Region 5, 77 W. Jackson Blvd., Seventh Floor, Chicago, Illinois. Respondents may contact Nancy-Ellen Zusman, Assistant Regional Counsel, at (312) 886-5825 to arrange to review the Administrative Record. An index of the Administrative Record is attached to this Order.

XIV. OPPORTUNITY TO CONFER

Within 3 business days after receipt of this Order, Respondents may request a conference with U.S. EPA. Any such conference shall be held within 5 business days from the date of the request, unless extended by agreement of the parties. At any conference held pursuant to the request, Respondents may appear in person or be represented by an attorney or other representative.

If a conference is held, Respondents may present any information, arguments or comments regarding this Order. Regardless of whether a conference is held, Respondents may submit any information, arguments or comments (including justifications for any assertions that the Order should be withdrawn against a Respondent), in writing to U.S. EPA within 2 business days following the conference, or within 7 business days of receipt of the Order if no conference is requested. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondents a right to seek review of this Order. Requests for a conference shall be directed to Nancy-Ellen Zusman, Assistant Regional Counsel, at (312) 886-5825. Written submittals shall be directed as specified in Section V.2 of this Order.

XV. SEVERABILITY

If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XVI. EFFECTIVE DATE

This Order shall be effective 10 business days following issuance unless a conference is requested as provided herein. If a conference is requested, this Order shall be effective 5 business days after the day of the conference.

IN THE MATTER OF:

LINDSAY LIGHT II SITE
CHICAGO, ILLINOIS

IT IS SO ORDERED

BY: William E. Muno
William E. Muno, Director
Superfund Division
United States
Environmental Protection Agency
Region 5

DATE: 6/6/76

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
LINDSAY LIGHT II
CHICAGO, ILLINOIS

UPDATE #3
JUNE 3, 1996

<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
07/26/95	STS Consultants Ltd.	U.S. EPA	The Chicago Dock & Canal Trust Report for Characterization Investigation: Gamma Radiation Survey, Lindsay Light II Site, Chicago, IL w/Attachments A-E (3 Volumes)	1324

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
LINDSAY LIGHT II
CHICAGO, ILLINOIS

UPDATE #2 (REVISED)
APRIL 1, 1996

<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
04/22/96	Simon, V., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Determination of Threat to Public Health and the Environment at the Lindsay Light II Site, Chicago, IL	40

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
LINDSAY LIGHT II
CHICAGO, ILLINOIS

UPDATE #1
SEPTEMBER 18, 1995

<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
09/00/93	Rogers & Associates Engineering Corporation	Chicago Dock & Canal Trust	Work Plan for Characterization of Radioactive Contamination, 316 East Illinois St., Chicago, Illinois: Appendix E, Supplemental; Other Sampling	17
10/05/95	Simon, V., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Determination of Threat to Public Health or the Environment at the Lindsay Light II Site	22

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
LINDSAY LIGHT II SITE
CHICAGO, ILLINOIS

ORIGINAL
May 2, 1994

<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
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08/18/93	Kouris, T., Ecology & Environment, Inc.	Pfundheller, J., U.S.EPA	Letter re: Site Assessment	4
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08/27/93	Klinger, J., Illinois Dept. of Nuclear Safety	Karl, R., U.S. EPA	Response to U.S. EPA Letter Dated 6/21/93	2
1/27/94	Muno, W., U.S. EPA	Chicago Dock & Canal Trust	Administrative Order by Consent	16
07/11/94	Simon, V., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum	12

ATTACHMENT B

LIABILITY FILE INDEX

1. Minutes from meetings of Lindsay Light II Company.
1922, 1924, 1925, 1929, 1931.
2. Chicago Tribune article.
July 1993.
3. 104(e) response from Kerr-McGee Corporation.
January 3, 1994.
4. Press release issued by The Chicago Dock & Canal Trust.
July 6, 1993.
5. Enforcement Confidential Addendum from Action Memo.
April 1996.

LIST OF RESPONDENTS RECEIVING UNILATERAL ADMINISTRATIVE ORDER
LINDSAY LIGHT II SITE

Kerr-McGee Chemical Corporation
c/o Richard A. Meserve, Esq.
Covington & Burling
1201 Pennsylvania Avenue, N.W.
P.O. Box 7566
Washington, D.C. 20044-7566

Chicago Dock & Canal Trust
c/o Vincent S. Oleskiewicz, Esq.
Baker & McKenzie
One Prudential Plaza
130 East Randolph Drive
Chicago, Illinois 60601



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 29 2000

REPLY TO THE ATTENTION OF:
Lindsay Light II Site/RV3 North Columbus Drive

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Lindsay Light II Site/RV3 North Columbus Drive
Chicago, Illinois

Dear Sirs:

Enclosed please find a First Amendment to the Unilateral Administrative Order issued by the United States Environmental Protection Agency (U.S. EPA) on June 6, 1996, under Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. Section 9601, *et seq.*

If you have any questions regarding the Amendment, feel free to contact Mary Fulghum, Assistant Regional Counsel at (312) 886-4683, Verneta Simon, On-Scene Coordinator at (312) 886-3601, or Fred Micke, On-Scene Coordinator at (312) 886-5123.

Sincerely yours,

A handwritten signature in black ink, appearing to read "W. E. Muno".

William E. Muno, Director
Superfund Division

Enclosure

cc: Thomas Skinner
Illinois Environmental Protection Agency, Division of Land Pollution Control
1021 North Grand Avenue East, Springfield, IL 62702

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 5

IN THE MATTER OF:)	Docket No. V-W-96-C-353
)	
Lindsay Light II Site/)	ADMINISTRATIVE ORDER
(RV3 North Columbus Drive))	PURSUANT TO SECTION 106(a)
)	OF THE COMPREHENSIVE
Respondents:)	ENVIRONMENTAL RESPONSE,
)	COMPENSATION, AND
)	LIABILITY ACT OF 1980,
River East Chicago L.L.C.)	AS AMENDED, 42 U.S.C.
Kerr-McGee Chemical L.L.C.)	\$9606(a)
Grand Pier Center L.L.C.)	

FIRST AMENDMENT TO ADMINISTRATIVE ORDER
PURSUANT TO SECTION 106(a)
OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION, AND LIABILITY ACT OF 1980,
as amended, 42 U.S.C. §9606(a)

The Administrative Order ("Order"), U.S. Environmental Protection Agency ("U.S. EPA") Docket No. V-W-96-C-353, issued on June 6, 1996, under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §9606(a), is hereby modified as follows:

JURISDICTION AND GENERAL PROVISIONS Section, Page 1, 2nd
Paragraph, Sentence 1 of the Order shall be amended to read:

This Order pertains to property located at 316 East Illinois Street, Chicago, Illinois, and also to property directly across Columbus Drive known as RV3 North Columbus Drive, bearing the Cook County Assessor's Parcel Number 17 10 212 019 (bound by North Columbus Drive, East Grand Avenue, North St. Clair Street, and East Illinois Street), Chicago, Illinois (the "Lindsay Light II Site" or the "Site").

FINDINGS OF FACT Section, Page 2, Paragraph 1., Sentence 1 of the Order shall be amended to read:

The Lindsay Light II Site ("the Site" or "the Facility") is located at 316 East Illinois Street, and also at Parcel Number 17 10 212 019 (bound by North Columbus Drive, East Grand Avenue, North St. Clair Street, and East Illinois Street), Chicago, Cook County, Illinois.

FINDINGS OF FACT Section, Page 2, Paragraph 2. of the Order shall be amended to read:

In 1996, the 316 E. Illinois parcel was a parking lot operated by General Parking and owned by River East Chicago L.L.C. ("River East") (successor to Chicago Dock and Canal Trust). Grand Pier L.L.C ("Grand Pier") is the owner of the RV3 North Columbus Drive portion of the Site.

FINDINGS OF FACT Section, Page 3, Paragraph 10. of the Order shall be added to read:

From June 1996 until March 2000, Respondents River East and Kerr-McGee Chemical L.L.C. ("Kerr-McGee") implemented a site Health and Safety Plan; implemented site security measures, implemented an air monitoring program; performed removal of contamination until the cleanup criterion of 5 picoCuries per gram total radium (Radium-226 + Radium-228) over background was achieved; established local background for Radium-226 and Radium-228 from four soil samples taken on the property at points where the gamma exposure rates are lowest plus eight soil samples taken off-site; transported and disposed of characterized or identified hazardous substances, pollutants, wastes, or contaminants at a RCRA/CERCLA/IDNS-approved disposal facility in accordance with the U.S. EPA Off-Site Rule; conducted off-site surveying and sampling as necessary and backfilled all excavations with suitable material, and if soil, tested borrow source for radioactivity and other pertinent characteristics in 40 CFR Part 261.

FINDINGS OF FACT Section, Paragraph 11. of the Order shall be added to read:

A Right-of-Way Agreement was entered among Kerr-McGee, River East and the City of Chicago which restricts access to subsurface soils below the streets and sidewalks surrounding the 316 East Illinois Street property. The Agreement requires, among other tasks, that anyone seeking a permit to conduct work in the subsurface soils must conduct radiation surveillance and that the City must give U.S. EPA notice that a permit application has been made. The agreement also requires that the City provide notice to all utilities of the Right-of-Way Agreement.

FINDINGS OF FACT Section, Paragraph 12. of the Order shall be added to read:

On at least two occasions since the approval of the Right-Of-Way Agreement, however, the parties apparently failed to comply with express provisions that require radiation surveillance and notice to U.S. EPA that a permit was applied for. In January or February 2000, the City of Chicago removed two hydrants from the Illinois Street right-of-way without notifying U.S. EPA. On or about January 24, 2000, River East obtained a permit and began to install a block-long sewer along Illinois Street from Columbus Drive to McClurg Court. Neither the City nor River East notified U.S. EPA of any excavation in the Illinois Street Right-of-Way. River East did not begin to conduct radiation surveillance until approximately ten days after it began the Illinois Street work. When radiation surveillance was instituted at the Illinois Street sewer project, four areas of elevated levels of radiation were discovered. U.S. EPA also surveyed off-site landfills that received material from the sewer excavation. One landfill potentially received radioactive material.

FINDINGS OF FACT Section, Paragraph 13. of the Order shall be added to read:

On February 29, 2000, U.S. EPA discovered elevated levels of radioactive materials at the Grand Pier development, which is located on the RV3 North Columbus Drive parcel directly across Columbus Drive from the 316 East Illinois Street property. Since the discovery of the RV3 North Columbus Drive contamination, U.S. EPA has worked with Grand Pier, Kerr-McGee and River East to implement the requirements of the existing Lindsay Light II Unilateral Administrative Order at the Grand Pier property and at the six off-site landfills that accepted potentially radioactive materials from the Grand Pier property.

CONCLUSIONS OF LAW AND DETERMINATIONS Section, Page 3, Paragraph 4., Sentences 1 and 2 of the Order shall be amended to read:

Respondents River East and Grand Pier are the present owners of the Lindsay Light II Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20). Respondent Kerr-McGee is a person who is the corporate successor of the Lindsay Light Company.

CONCLUSIONS OF LAW AND DETERMINATIONS Section, Page 4, Paragraph 6.a., line 4 of the Order shall be amended to include:

This factor is also present at the Site due to the presence of elevated gamma ray readings that were documented on February 29, 2000, to be as high as 1,000,000 counts per minute ("cpm"). In an uncontaminated area of the Site, the count rate was about 7,000 cpm. The clean-up criterion for the Lindsay Light II Site is 7.1 picoCuries per gram (pCi/g) which equates to 19,726 cpm. The highest gamma exposure rate reading measured at the Lindsay Light II Site/RV3 North Columbus Drive was approximately 1,300 microRoentgen per hour (μ R/hr). The background level for this Site was approximately 8 μ R/hr.

CONCLUSIONS OF LAW AND DETERMINATIONS Section, Page 5, Paragraph 6.b., of the Order shall have added:

On or about March 1, 2000, Grand Pier collected soil samples from its property. The highest sample result as of March 23, 2000 was 1,732 picoCuries per gram ("pCi/g") for total radium (Ra-226 + Ra-228). The clean-up level applied to the Site property directly across Columbus Drive at 316 East Illinois Street was 7.1 pCi/g total radium, including total radium background of 2.1 pCi/g. The sample analyses showed that the radioactive component was thorium. Thorium is a chain of 11 radionuclides beginning with thorium-232 and ending with non-radioactive lead 208. This chain emits gamma rays, X-rays, alpha particles and beta particles. Gamma rays and X-rays are penetrating photons that are an external exposure hazard. Photons can penetrate the skin and expose interior organs. Alpha particles are helium nuclei that are an ingestion and inhalation hazard. Beta particles are electrons that are principally an ingestion and inhalation hazard, but in high concentrations, might be a skin hazard.

CONCLUSIONS OF LAW AND DETERMINATIONS Section, Page 5, Paragraph 6.c., of the Order shall have added:

Given that U.S. EPA and Respondents detected contamination at the 316 E. Illinois and RV North Columbus Drive portions of the Lindsay Light II Site and in the adjacent streets, there is reason to suspect additional contamination may exist on other properties surrounding the Site. U.S. EPA will determine the boundaries of the contamination, and will require Respondents to implement additional controls, if U.S. EPA determines additional institutional controls are necessary.

ORDER Section, Page 7, 1st Paragraph, Sentences 1 and 2 of the Order shall be amended to read:

The U.S. EPA has designated Verneta Simon and/or Fred Micke of the Emergency Response Branch, Region 5, as its On-Scene Coordinators ("OSCs"). Respondents shall direct all submissions required by this Order to the OSCs at U.S. EPA, 77 West Jackson Boulevard, SE-5J, Chicago, Illinois, 60604-3590, by certified or express mail. Respondents shall also send a copy of all submissions to Mary Fulghum, Assistant Regional Counsel, 77 West Jackson Boulevard, C-14J, Chicago, Illinois, 60604-3590.

ACCESS TO ADMINISTRATIVE RECORD Section, Page 14, 1st Paragraph, 2nd Sentence of the Order shall be amended to read:

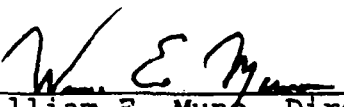
Respondents may contact Mary Fulghum, Assistant Regional Counsel, at (312) 886-4683 to arrange review of the Administrative Record.


OPPORTUNITY TO CONFER Section, Page 15, 2nd Paragraph, 4th Sentence of the Order shall be amended to read:

Requests for a conference shall be directed to Mary Fulghum, Assistant Regional Counsel, at (312) 886-4683.

This First Amendment to the Lindsay Light II Site Administrative Order is hereby incorporated into the Order as if it were originally part of the Order; all terms, conditions, and stipulations of the Order shall apply to this First Amendment.

By:


William E. Munn, Director
Superfund Division
U.S. Environmental Protection Agency
Region 5

 29, 2000.

LINDSAY LIGHT II SITE/RV3 NORTH COLUMBUS DRIVE

List of Respondents Receiving

First Amendment to UAO Docket No. V-W-96-C-353

**River East Chicago L.L.C.
c/o Peter Gillespie, Esq.
Baker & McKenzie
One Prudential Plaza
130 East Randolph Drive
Chicago, IL 60601**

**Kerr-McGee Chemical L.L.C.
c/o James T. Smith, Esq.
Covington & Burling
1201 Pennsylvania Avenue
P.O. Box 7566
Washington, D.C. 20044-7566**

**Grand Pier Center L.L.C.
c/o Michael P. Rissman, Esq.
Mayer, Brown & Platt
190 South LaSalle Street
Chicago, Illinois 60603-3441**

bcc: Docket Analyst, ORC (C-14J)
Mary Fulghum, ORC (C-14J)
Jose DeLeon, ORC (C-14J)
Verneta Simon, OSC (SE-5J)
Fred Micke, OSC (SE-5J)
Larry Jensen, RS-III (SE-5J)
John Maritote, EESS (SE-5J)
Debbie Regel, EESS (SE-5J)
Fushi Cai, EESS (SE-5J)
Toni Lesser, Public Affairs (P-19J) w/out attachments
Michael T. Chezick, Department of Interior
Tony Audia, PAAS (MF-10J)
Records Center (SMR-7J)
ERB Read File

U.S. ENVIRONMENTAL
PROTECTION AGENCY

APR 04 2000

OFFICE OF REGIONAL
COUNSEL



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO IL 60604-3590

REPLY TO THE ATTENTION OF

MEMORANDUM

DATE: **MAR 01 2001**

SUBJECT: ACTION MEMORANDUM AMENDMENT- Determination of Presence of Off-Site Thorium Contaminated Associated with the Lindsay Light II Site/(OU3/North McClurg Court) and Determination of a Threat to Public Health or the Environment, Chicago, Cook County, Illinois (Site Spill ID #YT)

FROM: Verneta Simon and Fred Micke, On-Scene Coordinators
Emergency Response Branch - Section III

TO: William E. Muno, Director
Superfund Division

I. PURPOSE

The purpose of this Lindsay Light II Action Memorandum Amendment is to document the presence of off-site thorium contamination associated with the Lindsay Light II Site and the determination of a threat to public health and the environment. The off-site contamination is present in subsurface soils in the vacant lot located at 341 E. Ohio, Chicago, Illinois. The vacant lot is across the street and directly north of the Lindsay Light II Site that is located at 316 E. Illinois Street, Chicago, Illinois. This is an amendment to the April 22, 1996 Lindsay Light II Action Memorandum that documented the threat to public health and the environment posed by the presence of subsurface thorium contamination at the Lindsay Light II site. The Lindsay Light II Action Memoranda dated July 11, 1994, October 5, 1995, April 22, 1996, September 22, 1999, and March 28, 2000 and their administrative records are fully incorporated by reference into this document.

This vacant lot containing off-site thorium contamination is commonly known as the Grand, McClurg, Ohio site or GMO site (see Figure 1). For accounting purposes, U.S. EPA designated this lot as Lindsay Light II Site/(OU3/North McClurg Court). The owner of the site is the Teachers' Retirement System of the State of Illinois. In April 2000, a potential purchaser of the site conducted limited radiological sampling and detected the thorium at levels that may present an imminent and substantial endangerment to human health and the environment. The property is presently a vacant parking lot that is to be developed into a mixed-used high-rise building.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # ILD 0000002212

This Site is not on the National Priorities List (NPL).

Beginning in about 1904 and continuing through the early 1930s, the Lindsay Light and Chemical Company manufactured gaslight mantles impregnated with thorium in the City of Chicago. The Lindsay Light operations originated at 22 W. Hubbard and later moved to 161 E. Grand and at 316 E. Illinois in Chicago, Illinois. The 316 E. Illinois address was the location where thorium was extracted from radioactive ores. The Hubbard and Grand sites are believed to be where thorium was used to manufacture mantles. These Lindsay Light refining and manufacturing processes created radioactive wastes that were disposed of in undetermined locations. Pursuant to an Administrative Order by Consent (AOC) authorized by Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) dated January 27, 1994, the Lindsay Light II property owner, Chicago Dock & Canal Trust ("Chicago Dock") characterized the thorium contamination present within the Lindsay Light II site at 316 East Illinois. On June 6, 1996, U.S. EPA issued a Unilateral Administrative Order, Docket No. V-W-96-C-353, (the "UAO"). The UAO required the Respondents, Kerr McGee Corporation and Chicago Dock, to remove thorium contaminated materials from the Lindsay Light II site and to conduct off-site surveying and sampling as necessary and, at a minimum implement the standards of 40 CFR 192 if deemed necessary should contamination be discovered beyond current site boundaries. In early February 2000, contractors for the City of Chicago conducting a sewer line replacement project along Illinois Street adjacent to the Lindsay Light II site discovered off-site thorium contamination. Later that month, U.S. EPA discovered thorium contamination at the Grand Pier L.L.C. development across the street and directly west of the Lindsay Light II site. On March 29, 2000, U.S. EPA issued the First Amendment to the UAO that amended the Lindsay Light II Site definition to include property directly west of and across the street from the Site, and which was designated as RV3/North Columbus Drive.

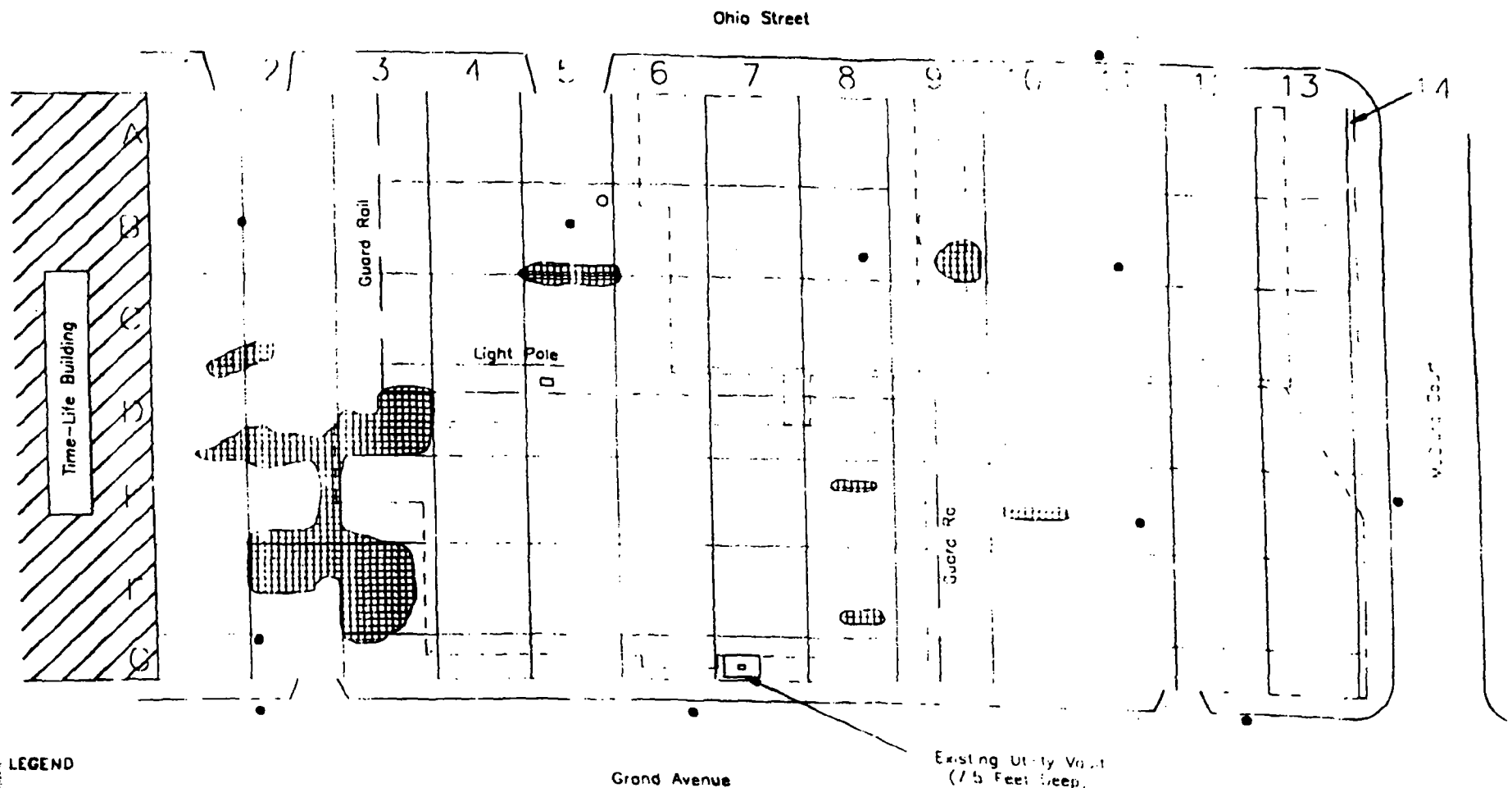
Please refer to the previous Action Memoranda dated July 11, 1994, October 5, 1995, April 22, 1996, September 22, 1999, and March 28, 2000 for a description of site conditions and background.

From 1947 to 1988, the GMO property that is the subject of this Amendment was the headquarters and research center for Velsicol Corporation and later Sandoz Limited. In 1988, the buildings were razed and the land was used for a parking lot. U.S. EPA has no information that Chicago Dock formerly owned the GMO property.

On May 31, 2000, TRS informed U.S. EPA that elevated levels of radioactive materials had been detected at the GMO property. This information was supported by the U.S. EPA Scanner Van radiation survey of the GMO property and by a gamma survey meter walkover by U.S. EPA staff. Following this disclosure, the property owner, Kerr-McGee L.L.C. and U.S. EPA met several times to discuss the extent of the contamination on the GMO property and make

preparations for its cleanup. Also, a letter was sent to the Potential Responsible Parties (PRPs) on July 13, 2000. This letter addressed the need to prepare a Work Plan for a Site Cleanup in accordance with the June 6, 1996 UAO..

An environmental justice (EJ) analysis was performed for this site and is contained in Attachment 7. In Illinois, the low-income percentage is 27 % and the minority percentage is 25 %. To meet EJ concern criteria, the area within 1 mile of this property must have a population that's twice the state low income percentage or/and twice that state minority percentage. That is, the area must be at least 54% low-income and/or 50% minority. At this site, the low-income percentage is 10.05 % and minority percentage is 19.64%, as determined by Arcview. Therefore, this site does not meet the region's EJ criteria based on the demographics as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998".



LEGEND



Exposure/Dose Rate Location within 10 Meter Grid



Elevated Gamma Radiation Area

— Approximate Property Boundary

— Approximate Location of Former Buildings

● Catch Basin

— 10 Meter Radiologic Survey Grid

Existing Utility Vault
(7.5 Feet Deep)

III. THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Lindsay Light II Site/(OU3/North McClurg Court) may pose an imminent and substantial endangerment to public health or welfare or the environment, based upon factors set forth in the National Contingency Plan (NCP), 40 CFR 300.415 (b)(2). These factors include:

a) actual or potential exposure to nearby populations, animals, or the food chain from hazardous substances or pollutants or contaminants:

This factor is present at the site due to the presence of elevated radiation readings that were documented in the May 2000 report submitted by the owner of the property. A copy of this report is contained in the Administrative Record. Readings as high as 95,000 counts per minute with a Ludlum Model 2221 Sodium Iodide Detector. Counts per a minute in an uncontaminated area for the Ludlum detector are generally about 7,000 counts per minute in this area.

The highest readings found on the property correspond to a cancer risk of 1×10^{-5} if persons are stationed over the contaminated areas for 22.5 minutes per day for a standard 250 day work year.

In addition, TRS, the property owner, intends to commence cleanup activities at the beginning of the year 2001 construction season which is approximately March 1, 2001. The removal of the asphalt covering the property and excavation activities also may result in inhalation, ingestion or direct contact contamination from thorium contaminants by workers or the public.

b) high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate:

Soil concentrations as high as 3020 picocuries per gram (pCi/g) for thorium-232 and 2880 pCi/g for thorium-228, both including background, were measured in site soils. This would correspond, on average, to about 2950 pCi/g for radium-228. Radium-226 levels were not reported but would be non-zero. Thus, the total radium concentration in soil (radium-226 + radium-228) would, minimally, be on the order of 2950 pCi/g. For comparison purposes, the clean-up level applied to the site directly south of the Site was 7.1 pCi/g total radium, including background.

The property owner, intends to commence cleanup activities at the beginning of the year 2001 construction season which is approximately March 1, 2001. The removal of the asphalt covering the property and excavation activities may expose thorium contaminated soil. If soils are not managed and disposed of in accordance with state and federal environmental requirements, uncontrolled exposure to and uncontrolled dispersal of radioactive materials might occur.

c) other situations or factors which may pose threats to public health or welfare or the environment:

Prior to the March 29, 2000 amendment to the 1996 UAO, thorium contaminated soils from the Grand Pier property were improperly excavated and disposed of at a landfill 35 miles from the Lindsay Light II site. If the thorium contamination present at the GMO property is not removed in accordance with the 1996 UAO provisions, thorium contaminated soils may not be properly managed and may result in excess radiation exposure to workers and the public and the spreading of contaminated soil beyond the site boundaries.

IV. ENDANGERMENT DETERMINATION

Given the nature of the Site, the nature of the contaminants - radioactive materials that cause external exposure, inhalation, ingestion, and direct contact hazards, as described in Sections II and III, the actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action described in this Action Memorandum Amendment, may pose an imminent and substantial endangerment to public health, or welfare, or the environment due to these radioactive materials.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

Pursuant to the 1996 UAO as amended, the PRP will fully remediate the site until maximum protectiveness of the human health and the environment is achieved. This will involve at a minimum the following actions:

- 1) Develop a Work Plan for the radiological assessment of the site.
- 2) Develop and implement a site radiological health and safety plan.
- 3) Develop and implement an air radiological monitoring plan.
- 4) Develop and implement site security measures, including radiological surveillance at the perimeter of radiological exclusion zones.
- 5) Conduct land surveying to the extent necessary to establish a grid system to locate all property boundaries, special features (pipes, storage tanks, etc.), and sample locations.
- 6) Conduct off-site radiological surveillance, gamma count rate measurements and soil sampling as necessary and, at a minimum implement 40 CFR 192 if deemed necessary should contamination be discovered within current site boundaries.

- 7) Place borings in critical locations (grid corners, high exposure rate areas, special features, etc.) for the purpose of measuring subsurface gamma count rate radiation levels. Measurements shall be recorded at each 6 inch depth until the natural soils are reached or gamma count rate radiation levels reach background, whichever is the greatest depth.
- 8) Collect soil samples from the borings and analyze for radionuclide identity and concentration and for RCRA characteristics. These results will then be used by the PRP to correlate subsurface radiation levels and radionuclide content, and to determine the disposal facility.
- 9) Conduct off-site radiological surveillance, gamma count rate measurements and soil sampling as necessary and, at a minimum implement 40 CFR 192 if deemed necessary should contamination be discovered beyond current site boundaries.
- 10) Based upon soil results, remove, transport and dispose of all characterized or identified hazardous substances, pollutants, wastes or contaminants at a RCRA/CERCLA approved disposal facility in accordance with the U.S. EPA off-site rule.
- 11) The soil clean-up criterion is 7.1 picoCuries per gram(pCi/g) total radium (Ra-226 + Ra-228) including background, unless analyses indicates the existence of additional contaminants, hazardous substances, pollutants or waste.

The OSC has begun planning for the provision of post-removal site control, consistent with the provisions of Section 300.415(k) of the NCP. However, the nature of future response actions should eliminate all exposure threats, which should minimize the need for on-site post-removal site control.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements (ARARS)

All applicable or relevant and appropriate requirements (ARARS) of Federal law will be complied with to the extent practicable. In a letter dated November 25, 1995 the Illinois Department of Nuclear Safety (IDNS) reclassified the radioactive material found there from "source" material to 11(e)2 "by-product" material. See Lindsay Light II Administrative Record Update #4, Documents 1- 4.

In accordance with the revised NCP, Section 300.825(a)(1), the response from the State to the request for ARARs was added to the administrative record for this site. See Lindsay Light II Administrative Record Update #4, Document # 4.

VI. CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED

Delayed or non-action may result in increased likelihood of external exposure, inhalation, ingestion or direct contact to human populations accessing and working on the site. Also, since there is no threshold for radiological risk, additional exposure to radiological materials will increase the cancer risk. Delay may increase the chance of spreading of contaminants beyond site boundaries.

VII. OUTSTANDING POLICY ISSUES

None.

IX. ENFORCEMENT

For administrative purposes, information concerning confidential enforcement strategy for this site is contained in the Enforcement Confidential Addendum.

X. RECOMMENDATION

This decision document represents the determination that the thorium contamination present at the GMO property is Lindsay Light II off-site contamination (Lindsay Light II Site/OU3 North McClurg Court), as defined in and subject to the Lindsay Light II Unilateral Administrative Order dated June 6, 1996. This decision document also represents the selected removal action for the Lindsay Light II Site/OU3/North McClurg Court), in Chicago, Illinois. This decision document was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision document is based upon the Administrative Record for this site. Conditions at the site meet the NCP Section 300.415(b)(2) criteria for a removal action.

APPROVE:
DIVISION

Richard C. Karl

DIRECTOR, SUPERFUND

DISAPPROVE: _____
DIVISION

DIRECTOR, SUPERFUND

Attachments: Enforcement Confidential Addendum

1. Action Memorandum dated March 28, 2000
2. Action Memorandum dated September 22, 1999
3. Right-of-Way Agreement
4. Action Memorandum dated April 22, 1996
5. Action Memorandum dated October 5, 1995
6. Action Memorandum dated July 11, 1994
7. Environmental Justice Analysis
8. Index to the Administrative Record

cc: Kevin Mould, USEPA, OERR,
Michael Chezik, U.S. Department of Interior
Tom Skinner, Director, Illinois Environmental Protection Agency, **w/o enforcement
addendum**
Steve Davis, Illinois Department of Natural Resources, **w/o enforcement addendum**
Thomas W. Ortziger, Illinois Department of Nuclear Safety, **w/o enforcement addendum**
William F. Abolt, Commissioner Department of Environment, City of Chicago, **w/o
enforcement addendum**

bcc: R. Karl, SE-5J
B. Messenger, SE-5J
T. Lesser, P-19J, w/o enforcement addendum
EERB Read File (C. Beck)
ERB Site File (SF Record Center)
V. Simon, SE-5J
F. Micke, SE-5J
L. Jensen, SE-5J
M. Fulghum, C-14J
C. Martwick, C-14J
L. Nachowicz, SE-5J
L. Fabinski, ATSDA-4J, w/o enforcement addendum

*** Please note the reference to the Enforcement Addendum. The addendum contains enforcement sensitive information and is not for general distribution.**

APPENDIX B

Work Plan (under separate cover)



The Work Plan is provided under separate cover.



APPENDIX C

Work Plan Change Correspondence with USEPA





June 25, 2002

Ms. Verneta Simon
Mr. Fred Micke
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Request for Removal Action Work Plan Change, 341 East Ohio Street Site, Chicago, Illinois –
STS Project No. 1-25585-XI, Correspondence No. 090, Task 5000

Dear Ms. Simon and Mr. Micke:

The Removal Action Work Plan for the above-referenced site involves two phases of work. The first phase consists of removing the pavement and excavating all radiologically-impacted soil that is evident at that time. Phase 1, as proposed in the Removal Action Work Plan, is to be completed over the entire site, Areas 1, 2, 3 and 4. Following completion of Phase 1, the second phase will involve excavating all remaining fill soil in lifts 18 inches thick.

The requested change is to conduct Phase 2 in Area 1, at the southwest part of the site, before completing Phase 1 in Areas 2, 3 and 4. This will allow Area 1 to be backfilled and used for project operations (equipment storage, truck staging, etc.).

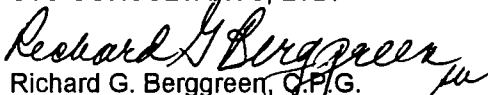
The specific Phase 2 work for clearing Area 1 would consist of the following:

1. All areas would be surveyed to document that the surface is below the 7.1 pCi/g cleanup threshold.
2. All concrete walls, footings, foundations, etc., would be removed and frisked clean as they are removed.
3. All steep side slopes, knobs and ridges within the areas excavated as part of Phase 1 will be graded to more gentle slopes, on the order of 3 or 4 horizontal to 1 vertical. That graded surface will be surveyed to identify any elevated radioactivity. Any area exhibiting elevated radioactivity will be excavated to clean limits, below 7.1 pCi/g.
4. The remainder of the fill will be screened as it is excavated in 18 inch lifts through to the natural sand soil. Records will be made of each lift and the measured radioactivity. USEPA signoff will be obtained upon completion of the lift excavations, at native sand, for each sub-area surveyed clean. Upon receipt of USEPA signoff, the area will be available to be backfilled.

We request USEPA approve this revision to the Removal Action Work Plan. Please contact Richard Berggreen, Project Coordinator, with any questions you may have.

Regards,

STS CONSULTANTS, LTD.


Richard G. Berggreen, C.F.G.
Principal Geologist

cc: Timothy Ramsey, Piper Rudnick



July 8, 2002

Mr. Fred Micke
Ms. Verneta Simon
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Work Plan Revision Request – STS Project No. 1-25585-XI, Correspondence No. 093

Dear Mr. Micke and Ms. Simon:

STS Consultants, Ltd. (STS) submitted a request June 25, 2002 to revise the Work Plan. The request included a change in sequence where Area 1 would be carried through Phase 1 (removal of all identified radiologically-impacted soil) and Phase 2 (excavation and screening of all fill soil in 18 inch lifts) before moving to Area 2. Further, we had requested that the Phase 2 work in Area 1 include flattening the slopes of the excavations left after Phase 1, to facilitate walkover surveys.

In response to our request, in a telephone call from Ms. Verneta Simon, we understand the request as proposed was denied. The objection was to the flattening of the slopes which might spread radiologically-impacted soil to unimpacted areas.

We therefore, are revising the change request to specify that no flattening of the slopes will be done. The 18 inch lift surveys will be performed as the fill is excavated without any grading.

The change request consists of only the sequence change, wherein Area 1 is taken through Phases 1 and 2 before progressing to Area 2. Based on our telephone conversation, we understand USEPA has no objection to this revision. Please confirm your concurrence in writing for our files.

Thank you for your consideration in this matter.

Regards,

STS CONSULTANTS, LTD.

A handwritten signature in black ink, appearing to read 'R.G. Berggreen', with a horizontal line extending to the right.

Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Timothy Ramsey, Piper Rudnick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

JUL 18 2002

SE-5J

VIA FACSIMILE (847) 279-2510 & (312) 755-6022
AND U.S. MAIL

Mr. Richard Berggreen
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: 341 East Ohio Work Plan
Lindsay Light II Site/North McClurg Court

Dear Mr. Berggreen:

This letter is in response to your facsimile dated July 8, 2002 regarding written documentation for a verbal denial made by U. S. EPA for a work plan change proposed on June 25, 2002. On July 2, 2002, the following work plan change was denied:

3. All steep side slopes, knobs and ridges within the areas excavated as part of Phase 1 will be graded to more gentle slopes on the order of 3 or 4 horizontal to 1 vertical. That graded surface will be surveyed to identify and elevated radioactivity. Any area exhibiting elevated radioactivity will be excavated to clean limits below 7.1 picoCuries per gram (pCi/g).

This change was denied because this activity may mix together radioactive material above and below the cleanup level of 7.1 pCi/g, which is not an acceptable method of cleanup. Instead U.S. EPA requires that you excavate the steep slopes, knobs, etc. in 18 inch lifts. After determining that the 18 inch lift material does not exceed 7.1 pCi/g, this removed material can be

used as clean fill for slope or grading. The remainder of the work plan change requested in your June 25, 2002 facsimile to me, i.e., conducting Phase 2 work in Area 1 prior to completing Phase 1 work in Areas 2, 3, and 4 is approved. In addition, the sequencing of Phase 2 work, as proposed in your June 25, 2002 facsimile to me is approved with the following changes:

1. All areas would be surveyed to document that the surface is below 7.1 pCi/g cleanup threshold.
2. All concrete walls, footings, foundations, etc. would be removed and frisked clean as they are removed.
3. All steep side slopes, knobs and ridges, within the areas excavated as part of Phase 1 will be excavated in 18 inch lifts. After determining that the 18 inch lift material does not exceed 7.1 pCi/g, this removed material can be used as clean fill for slope or grading. Records will be made of each lift and measured radioactivity. U.S. EPA signoff will be obtained upon completion of the lift excavations, at native sand, for each sub-area surveyed clean. Upon receipt of U.S. EPA signoff, the area will be available to be backfilled.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886-5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5026.

Sincerely,



Verneta Simon
On-Scene Coordinator



August 16, 2002

Mr. Fred Micke, On-Scene Coordinator
Ms. Verneta Simon, On-Scene Coordinator
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Proposed Revision to Approved Amended Removal Action Work Plan, 341 East Ohio Street Site,
Chicago, Illinois – STS Project NO. 1-25585-XG, Correspondence No. 110

Dear Mr. Micke and Ms. Simon:

On behalf of TRS, STS Consultants, Ltd. (STS) is requesting a revision to the approved Amended Removal Action Work Plan for the 341 East Ohio Street Site. We previously requested and USEPA approved a revision relative to the sequence of removal actions in Area 1. The revision was to conduct Phase I and Phase II removals in Area 1 before proceeding to Areas 2, 3 and 4. That request was primarily to allow the use of Area 1 for equipment and material staging without having multiple moves.

The current request is for the same change in sequence for Areas 2, 3 and 4. That is to complete Phase I followed by Phase II on Area 2 before moving to Area 3, and complete Phase I followed by Phase II on Area 3 before moving to Area 4.

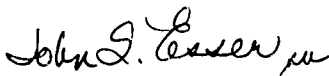
The principal reason for this requested revision is an effort to minimize traffic on exposed soil and reduce dust generation. Additionally, the maintenance of pavement in Area 4 until completion of Areas 2 and 3 will allow for the use of the on-site scale for weighing trucks.

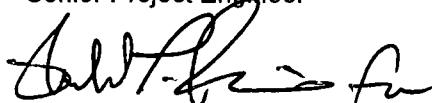
It is our opinion that this change will not significantly change the schedule or cost, and may increase the efficiency of the work, as traffic patterns will be less disrupted during Phase II work in Areas 2 and 3.

Upon your review of this request, if it can be approved, please provide written confirmation of your concurrence for our project files. Please contact the undersigned with any questions you may have.

Regards,

STS CONSULTANTS, LTD.


John S. Esser, P.E., P.G.
Senior Project Engineer


Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Timothy Ramsey, Piper Rudnick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

SE-5J

AUG 22 2002

VIA FACSIMILE (847)279-2510 AND U.S. MAIL

Mr. Richard Berggreen
Mr. John Esser
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: 341 East Ohio Work Plan, Chicago, Illinois
Lindsay Light II Site/North McClurg Court

Dear Messrs. Berggreen and Esser:

This letter is in response to your facsimile dated August 16, 2002 regarding written concurrence on the sequence of remediation activities in Areas 2, 3, and 4. U.S. EPA agrees with the following sequence proposed: complete Phase I and Phase II activities in Area 2 before moving to Area 3, and then complete Phase I and II activities in Area 3, before moving to Area 4, etc.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886-5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5025.

Sincerely,

A handwritten signature in cursive script, reading "Verneta Simon", is written over a horizontal line.

Verneta Simon
On-Scene Coordinator



September 27, 2002

Mr. Fred Micke, On-Scene Coordinator
Ms. Verneta Simon, On-Scene Coordinator
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Work Plan Change Request, 341 East Ohio Street Site, Chicago, Illinois - STS Project
No. 25585-XI, Correspondence No. 122

Dear Mr. Micke and Ms. Simon:

This letter is to request your written concurrence with two revisions in the Work Plan related to work currently being conducted at the above referenced site. We understand these revisions from the procedures specified in the Work Plan were accepted in discussions in the field during a site visit. By this letter we are providing a written description of the changes and are requesting your concurrence.

The first change deals with the wedge of soil remaining along the north margin of the site. The Work Plan provides that the wedge of material below a slope of 1.5H:1V extending inward from the property line, be allowed to remain in place after the perimeter drilling program documented the material as non-radiologically-impacted. Note that in those areas where the drilling program showed the presence of impacted material, that material would be removed to clean limits or to the property line. In the course of excavating this location along the north margin of Areas 3 and 4, a foundation wall was encountered approximately 7 feet south of the northern property line. It was feasible to excavate vertically along the inside of this wall, toward the site, down to the natural sands, thus removing and allowing an increased quantity of the soil to be surveyed south of the wall. The presence of the wall, however, made the excavation between the wall and the sidewalk difficult as the bucket of the backhoe could not articulate to a point where the material on the outside of the wall could be excavated. As a result, the upper portion of the wedge on the outside of the wall, from a zero thickness at the sidewalk to a thickness of about 3 feet adjacent to the wall, would remain in place. That soil, however, was subject to a walkover gamma survey following the pavement stripping, such that the upper approximately 18 inches was surveyed. A sketch illustrating the slope, the concrete wall and the material proposed to remain is attached. This material was explored with the perimeter drilling program and was found to be non-radiologically impacted.

We are therefore requesting a change in the Work Plan to allow the upper part of the sloping wedge (north of the wall) to remain in place where this wall occurs. Soil has been removed which was not previously proposed to be removed, as the lower portion of the wedge was removed and surveyed on the inside of the wall. In that the soil remaining north of the wall has been explored through the perimeter drilling program, the upper portion of the remaining soil was surveyed through the walkover gamma survey, and soil was removed that was not originally proposed to be removed, we request your written concurrence with this change, and your concurrence that no restriction on your sign-off regarding the completeness and adequacy of the removal action will result from this change in the Work Plan.

The second change involves the presence of a number of large concrete foundation elements in Areas 3 and 4. These elements appear to be pile caps for a former building at this site. It is noteworthy that they do not appear to have been associated with the building most recently removed from the site. In the course of the excavation and removal, it was noted that the floor slab for the most recent building did not have columns at the locations where these foundation elements were present. This indicates that the foundation elements were not constructed for that building, but were left from a former structure. In that the most recent building was constructed at the time Lindsay Light and Chemical Company was beginning operations on the adjacent parcel to the south (based on Sanborn Fire Insurance maps documenting building construction in 1917 and Lindsay operations to the south beginning 1916), these concrete pile caps must necessarily predate the Lindsay Light operations. Additionally, the field observations show that the concrete pile caps were formed and poured in the natural sand. No evidence of urban fill was noted surrounding these features. In accordance with the Work Plan, all fill material will be excavated down to and surrounding the features. At all of the concrete pile caps exposed, no evidence of radiologically impacted material was noted beneath the floor slab for the building that post-dated these features. As a result, we request your concurrence that these items may be left in place, and that no restriction on your sign-off regarding the completeness and adequacy of the removal action will result from this change in the Work Plan.

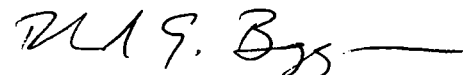
We appreciate your concurrence on this matter. Please provide us written confirmation of your agreement with this letter for our files. Please contact us with any questions you may have regarding this matter.

Regards,

STS CONSULTANTS, LTD.

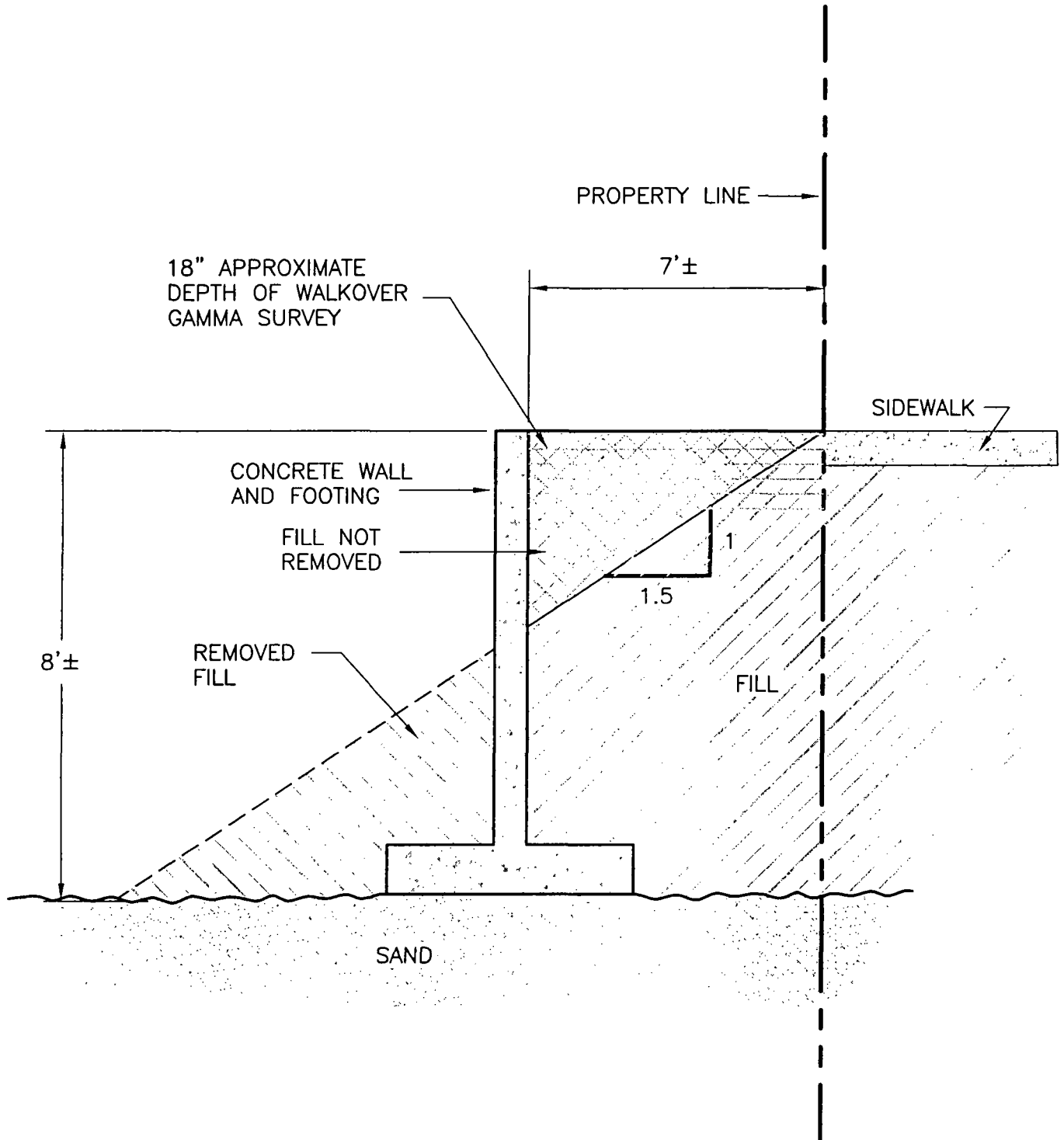


John S. Esser, P.G., P.E.
Senior Project Engineer



Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Tim Ramsey, Piper Rudnick
Tom Pabian, Capri Capital



X:\PROJECTS\125585X\GG-125585X-DETAIL.dwg 09/26/2002 09:



STS Consultants Ltd.
Consulting Engineers

SKETCH OF REQUESTED WORK PLAN REVISION
NORTH WALL EXCAVATION
341 EAST OHIO STREET SITE
CHICAGO, ILLINOIS

DRAWN BY	KKB	9-24-02
CHECKED BY		
APPROVED BY	RGB	9-24-02
CADFILE	SCALE	
GG-125585X-DETAIL.dwg	NTS	
STS PROJECT NO.	FIGURE NO.	
25585-XI		

October 8, 2002

Ms. Verneta Simon
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Change to Work Plan Request, Additional Information – STS Project No. 1-25585-XI,
Correspondence No. 127

Dear Ms. Simon:

STS Consultants recently submitted a request for a change in the Work Plan regarding leaving certain concrete structures at the site. That request was dated September 27, 2002. In your review of that request, you have asked for some additional information, which we are providing in this letter.

With regard to the wall we are planning on leaving along the north margin of the site, we noted the perimeter drilling found no evidence of impacts in this area. You asked us for more specific information. Along the north portion of the perimeter drilling, impacts were noted between M.9-8.5 and N.1-10. The area where we are proposing to leave the wall is farther to the east, extending from 13.5 to 15.5 between lines M and N. As a result, we have no evidence of impacted material in the vicinity of the wall we request to leave in place.

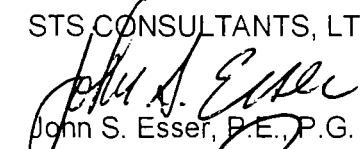
You also asked for the specific dates when the discussion regarding this matter occurred with the STS field representatives. In checking field notes we find the site visit for this area occurred on September 19, 2002.

Finally, to clarify a question you asked in our telephone conversation this date, the additional material removed from the inside, site side, of the wall was removed for engineering reasons, as it was easier to remove it than to try to work the slope adjacent to the wall. No impacted material was found at that location.

We appreciate your attention to this matter. Please contact us with any further questions you have regarding this matter.

Regards,

STS CONSULTANTS, LTD.



John S. Esser, P.E., P.G.
Senior Project Engineer



Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Timothy Ramsey, Piper Rudnick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

OCT 15 2002

SE-50

VIA FACSIMILE (847) 279-2510 AND U.S. MAIL

Mr. Richard Berggreen
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: 341 East Ohio Work Plan
Lindsay Light II Site/North McClurg Court

Dear Mr. Berggreen:

This letter is in response to your facsimiles dated September 27 and October 8, 2002 regarding written concurrence for discussions in the field on September 19, 2002. U.S. EPA agrees to the work plan changes described in your September 27, 2002 facsimile and supplemental information provided on October 8, 2002, which both involve leaving soil that was either surveyed and deemed non-radiologically impacted or by inference was deemed non-radiologically impacted.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886 5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5026.

Sincerely,

A handwritten signature in cursive script, reading "Verneta Simon", is written above the typed name.

Verneta Simon
On-Scene Coordinator

APPENDIX D

Pesticide Sampling/Removal Memorandum



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
SE-5J

JUL 07 2002

VIA FACSIMILE (847) 279-2510 AND U.S. MAIL

Mr. Richard Berggreen
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: Pesticide Excavation and Verification Sampling
341 East Ohio, Chicago, Illinois
Lindsay Light II Site/North McClurg Court

Dear Mr. Berggreen:

This letter is in response to your facsimile dated July 31, 2002 regarding U.S. EPA signoff on the pesticide verification sampling. We have reviewed your facsimile and the letter dated March 15, 2002 from Renee Cipriano, Director of the Illinois Environmental Protection Agency (Illinois EPA) to James Montana, Jr., Piper, Marbury, Rudnick & Wolfe. We agree that our signoff of the pesticide verification sampling will expedite remediation activities as long as the excavation meets the residential clean-up objectives specified by Illinois EPA. Therefore, please provide us with the pre-verification immunoassay results, the laboratory verification analytical results and sign-off form for each applicable grid.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886-5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5026.

Sincerely,

A handwritten signature in cursive script that reads "Verneta Simon".

Verneta Simon
On-Scene Coordinator



July 31, 2002

Mr. Fred Micke, On-Scene Coordinator
Ms. Verneta Simon, On-Scene Coordinator
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Pesticide Excavation and Verification Sampling, 341 E. Ohio Street Site, Chicago, Illinois – STS
Project No. 1-25585-XI, Task 2300, Correspondence No. 103

Dear Mr. Micke and Ms. Simon:

Attached please find for your reference a copy of a memorandum regarding pesticide excavation and verification sampling at the 341 E. Ohio Street Site in Chicago, Illinois. Note that this memorandum provides the field team with guidance for removal and verification sampling which is described in general terms in the Amended Removal Action Work Plan (Work Plan) and does not represent a revision or change to the Work Plan.

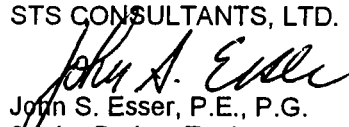
Because the work described in this memorandum does involve sampling and verification of the cleanup, we are requesting that upon demonstration in accordance with this memorandum that the soil meets the specified cleanup criteria for pesticides, USEPA provide signoff on the completion of this portion of the removal action in the applicable grid areas. We propose to provide USEPA with the pre-verification immunoassay results, the laboratory verification analytical results and a sign-off form for each grid area.

Obtaining USEPA sign-off will facilitate our ability to demonstrate completion of the Phase 1 excavation work (which includes removal of these pesticide-impacted soils) and compliance with the non-radiological remedial portion of the Work Plan.

Please contact us with any questions.

Regards,

STS CONSULTANTS, LTD.


John S. Esser, P.E., P.G.
Senior Project Engineer


Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Tim Ramsey, Piper Rudnick

Enclosure



Memorandum

TO: Dumas Guerrier

cc: Tim Ramsey
Steve Kornder

FROM: John Esser, Richard Berggreen

DATE: July 26, 2002

RE: Pesticide Excavation and Verification Sampling
341 E. Ohio Street, Chicago, Illinois
STS Project No. 1-6-25585-XI, Task 2300

This memorandum is intended to describe procedures to be followed in the field to complete the excavation and verification sampling in the Pesticide Impact Area. This memorandum provides additional details for this portion of the removal action which is described in general terms in the Amended Removal Action Work Plan (Work Plan) and associated documents and is intended to be consistent with the general approach reflected in the Work Plan.

Pesticide Impact Area

The Pesticide Impact Area is defined on the basis of the previously completed soil borings and analytical sampling and is depicted in the attached Figure 1. Additional soil sampling and analysis will be performed during the removal action to further delineate continuous extensions of the Pesticide Impact Area depicted on Figure 1 the extent of pesticide impacts for the purpose of removing pesticide contaminated soil in the Pesticide Impact Area and any continuous extensions thereof that exceeds the Illinois Tier 1 residential remediation objective for ingestion and inhalation.

Excavation Sequence

The excavation sequence and procedures are defined in the Work Plan. In review, the excavation and removal sequence for subsurface soils are as follows:

1. Area 1/Area 2 - Phase 1 Radiological-Impacted Soil Removal
 - a. Remove pavement/gravel base course.
 - b. Perform Phase 1 removal of radiological-impacted soils.
 - c. Perform verification surveys/sampling of the excavation grade following Phase 1 removal of radiological-impacted soils in accordance with Work Plan.

- d. USEPA Notification of Successful Phase 1 Verification Survey in accordance with Work Plan.
- e. At this point, it is anticipated that the excavation grade will likely be characterized as a hummocky with irregular topography. The excavation depths may vary from near zero (just below pavement/base course removal) to approximately 10 feet below grade. The soils exposed at the completion of Phase 1 radiological material removal may consist of urban fill or natural sand (in deepest portions of excavation).
- f. Note that it may be necessary during Phase 1 radiological material removal to excavate a limited amount of non-radiological soil for excavation access or excavation stability. Within the defined Pesticide Impact Area, these non-radiological soils will be loaded, transported, and disposed as pesticide-impacted soil in accordance with the procedures defined in the Work Plan.

2. Pesticide Impacted Soil Excavation

- a. Discretionary pesticide sampling (described later) will be used to further delineate the lateral and vertical limits of remaining soil with pesticide impacts above the Tier 1 clean-up objectives.
- b. Where pesticide concentrations exceed the Tier 1 objectives, soil will be excavated in 18-inch lifts to a depth based on the depth of the discretionary sampling. Radiological screening will be performed following excavation of each 18-inch lift of soil. Radiological-impacted soils will be managed and disposed in accordance with the Work Plan. Non-radiological-impacted soils that are impacted by pesticides above the Tier 1 clean-up levels will be managed and disposed as pesticide-impacted soils in accordance with the Work Plan.
- c. Excavation in 18-inch lifts will continue as deep as necessary to remove pesticide-impacted soil that exceeds the Tier 1 objective. Additional discretionary sampling can be used to guide the lateral and vertical limits of excavation.
- d. After discretionary sampling indicates that pesticide-impacted soils have been removed, pre-verification sampling (described later) will be performed.

Soil Sampling and Analysis for Pesticide Contamination

- 1. Discretionary Pesticide Sampling - Discretionary pesticide sampling will be used in the field at the direction of the Field Team Leader for the purpose of evaluating pesticide concentrations of in-situ soils in the vicinity of the original soil borings. Discretionary samples will be collected as grab samples from shallow test pits, grab samples from the excavation surface following Phase 1 radiological soil removal, and as composite samples taken over a vertical interval on the excavation sidewalls. The soil sample and analysis will be performed using the field immunoassay procedure (SOP 500). Discretionary sampling will be employed to aid in delineating the lateral and vertical extent of pesticide impacts. The results of the discretionary sampling will be used to aid in the excavation and management of pesticide-impacted soils.

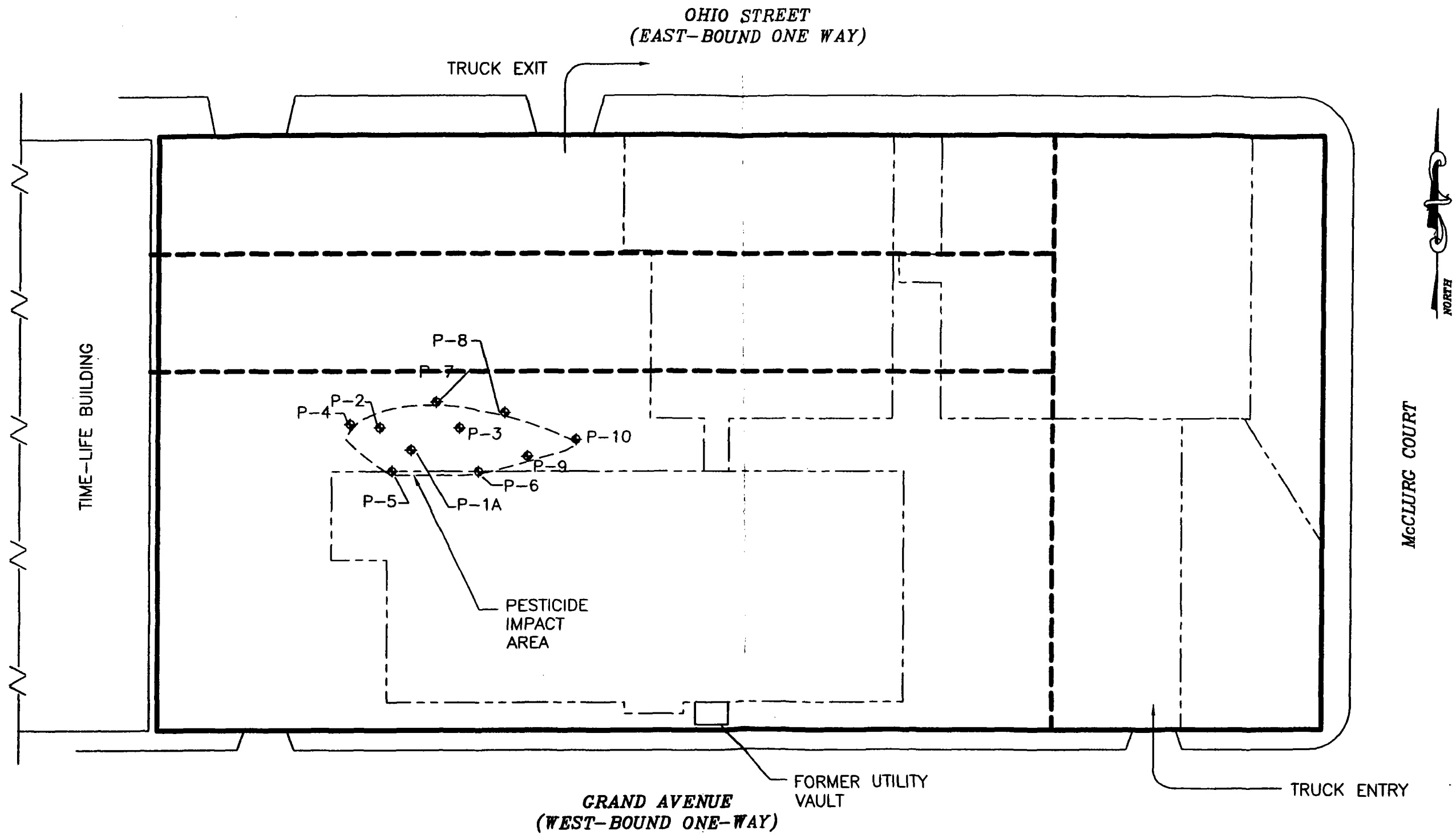
2. Pre-Verification Pesticide Sampling - Pre-verification pesticide sampling will be performed on a pre-specified grid pattern (for excavation floor samples) or a pre-specified horizontal spacing (for excavation sidewall samples) after soils exceeding the Tier 1 clean-up objective have been excavated.
 - a. Pre-Verification Grid Samples - The pre-verification sampling grid for these types of samples will be defined by 10-meter by 10-meter squares (see Figure 2) to yield an effective sampling area of 100 square meters per pre-verification sample. Each pre-verification grid sample will be prepared from a composite of five sub-samples collected from within the 10-meter by 10-meter sample area. The sub-sampling locations will be obtained by dividing the 10-meter by 10-meter sampling area into four equal quadrants measuring 5-meters by 5-meters. Four of the sub-samples will be collected from the center of the 5-meter by 5-meter quadrants. The fifth sub-sample will be obtained from the center of the 10-meter by 10-meter sample area. Sufficient soil volume will be obtained to allow pre-verification analysis and also subsequent laboratory analysis (if desired).
 - b. Pre-Verification Sidewall Samples - The excavation following completion of Phase 1 radiological soil removal and pesticide-impacted soil removal is anticipated to be characterized as a near-horizontal but irregular surface. In particular, it is possible that the excavation will not have distinct excavation sidewalls. Consequently, conventional "sidewall sampling" will not be possible and in that case the pre-verification grid sampling described above is expected to appropriately represent conditions in the sampled area. However, in the event that distinct excavation sidewalls are exposed following the removal of the pesticide-impacted soils, pre-verification sidewall samples will be collected. The pre-verification sidewall samples will be collected as a vertical composite of 5 sub-samples taken at equally spaced vertical intervals over the full height of the excavation sidewall. Additional pre-verification sidewall samples will be taken at a horizontal spacing of one per 10-meters of excavation sidewall. Sufficient soil volume will be obtained to allow pre-verification analysis and also subsequent laboratory analysis (if desired).
 - c. Sample Analysis - The pre-verification sample will be analyzed using the field immunoassay procedure (SOP 500).
 - d. Comparison to Clean-up Standard - The results of the pre-verification sample analyses will be compared to the compound-specific Illinois Tier 1 Residential Remediation Objectives for Ingestion and Inhalation listed below. In the event that the measured concentration in the pre-verification sample exceeds the applicable Tier 1 objective, pesticide excavation will resume in that area and the associated laboratory verification sample will not be submitted for laboratory analysis. Instead, pre-verification sampling will be repeated following the additional excavation.
3. Verification Pesticide Sampling - When the results of the pre-verification pesticide sampling and analysis for a given 100-square meter area and any applicable excavation sidewall samples are below the Tier 1 objective, verification samples will be submitted for laboratory pesticide analysis by STL St. Louis.

- a. **Verification Grid Samples** - The sampling grid and sampling procedure for the verification grid samples will be identical to that of the pre-verification grid samples described above.
- b. **Verification Sidewall Samples** - If the excavation characteristics are such that they allow the collection of one or more pre-verification sidewall samples, verification sidewall samples will be collected for the same location(s). The sample spacing and sampling procedure for the verification sidewall samples will be identical to that of the pre-verification sidewall samples described above.
- c. **Soil Sampling Procedure** - The soil sample for laboratory verification sampling can be obtained as a split-sample from the pre-verification sample volume or as an independent sample collected from the same location and in the same manner as the associated pre-verification sample. All verification soil samples will be collected in laboratory-supplied sample containers and preserved in accordance with laboratory requirements for shipping to STL St. Louis.
- d. **Sample Analysis** - Verification soil samples will be analyzed for the seven pesticides listed in the Work Plan as well as 4,4-DDT (and provided in the table below) by STL St. Louis in accordance with the applicable requirements of the Quality Assurance Project Plan (QAPP). Test method will be SW-846 Method 8081A.
- e. **Comparison to Clean-up Standard** - The results of the verification sample laboratory analyses will be compared to the Illinois Tier 1 Residential Remediation Objectives for Ingestion and Inhalation listed below. In the event that a target pesticide concentration in the verification sample exceeds the applicable Tier 1 objective, pesticide excavation will resume in that grid area (in 18-inch lifts) and the area will be re-sampled.

Illinois Tier 1 Residential Remediation Objectives for Ingestion and Inhalation


The following Illinois Tier 1 residential standards are provided for reference in evaluating the verification sample laboratory analysis results.

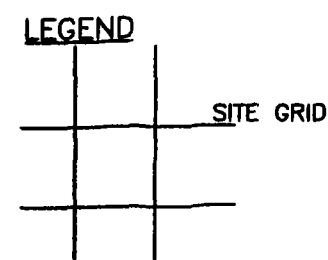
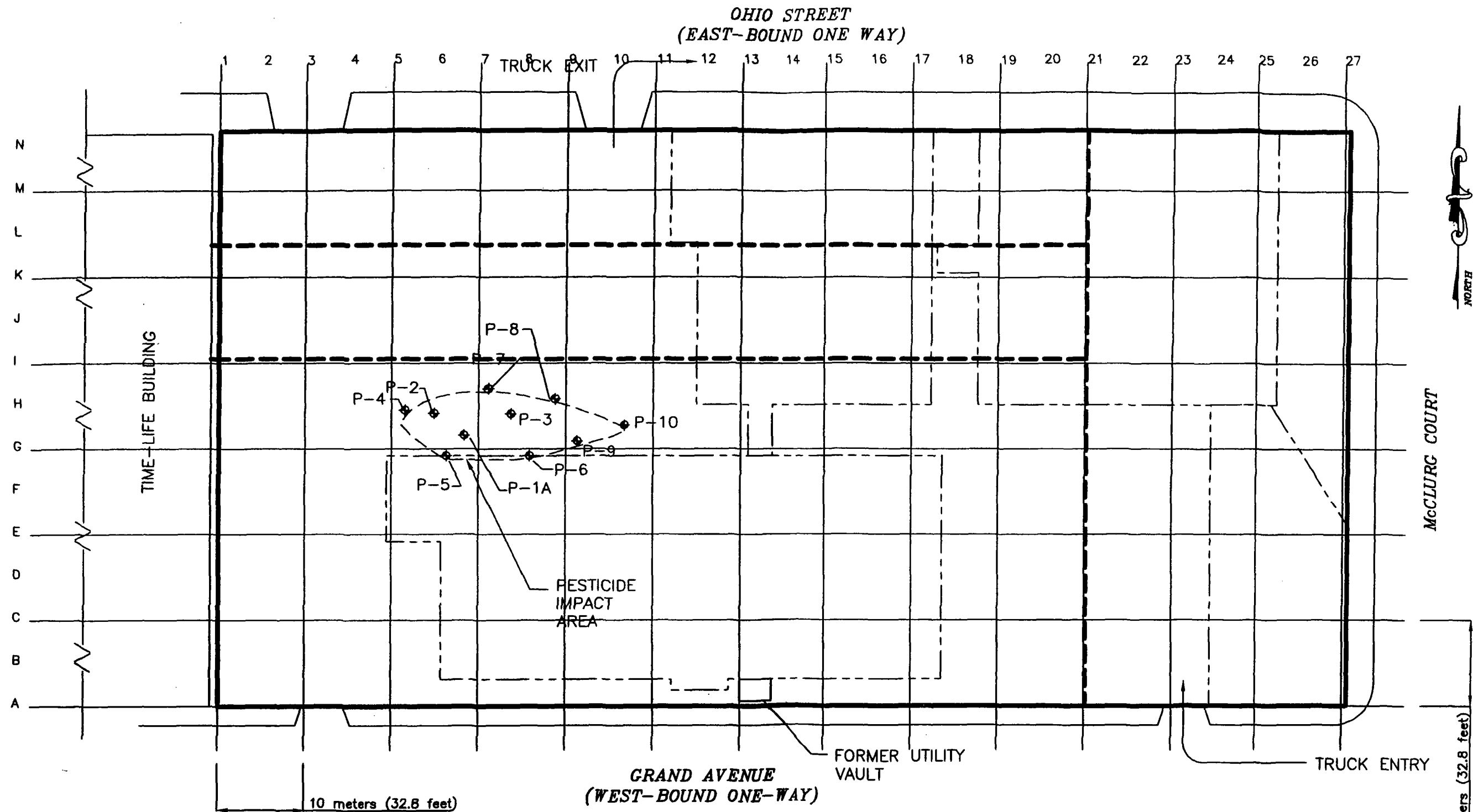
Compound	Site-Specific Clean-up Objective	Illinois Tier 1 Remediation Objective	
		Ingestion (mg/kg)	Inhalation (mg/kg)
Aldrin	0.04	0.04	3
alpha-BHC	0.1	0.1	0.8
Chlordane	1.8	1.8	72
Dieldrin	0.04	0.04	1
Heptachlor	0.1	0.1	0.1
Heptachlor epoxide	0.07	0.07	5
Lindane	0.5	0.5	--
4,4-DDT	2	2	--



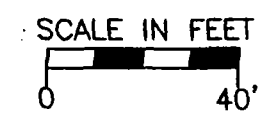
LEGEND

BASE MAP FROM GAIATECH, APRIL 2000

DATE	7/23/02
DRAWN BY	JSE
CHECKED BY	JSE
APPROVED BY	
CADFILE	X:\PROJECTS\125585XG\ SITE GRID MAP.dwg
PESTICIDE IMPACT AREA 341 E. OHIO STREET PROJECT CHICAGO, ILLINOIS	
 STS Consultants Ltd. Consulting Engineers	
STS PROJECT NO. 25585-XI	
STS PROJECT FILE	
SCALE AS SHOWN	
FIGURE NO. 1	



BASE MAP FROM GAIATECH, APRIL 2000



SITE GRID LAYOUT PESTICIDE IMPACT AREA 341 E. OHIO STREET PROJECT CHICAGO, ILLINOIS	DRAWN BY	JSE	DATE	7/23/02
	CHECKED BY	JSE	DATE	7/23/02
	APPROVED BY		DATE	
CADFILE X:\PROJECTS\125585XG\ SITE GRID MAP.dwg				
STS Consultants Ltd. Consulting Engineers				
STS PROJECT NO. 25585-XI				
STS PROJECT FILE				
SCALE AS SHOWN				
FIGURE NO. 2				

APPENDIX E

USEPA Signed Notification of Successful Verification Sampling Forms - Radiological



Phase I Exclusion Zone



Phase II EXCLUSION 202

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYArea Identification: A-B 26Date of Verification Survey: 6-11-02Time of Verification Survey 3:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 6-11-02
John Anderson (Print Name)
Recomps Manager (Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 6/12/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 6/12/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase II Excavation 200

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-5-D, 15.5-17
Date of Verification Survey: 7-8-02
Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 7-8-02
Tetta Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

[Signature] Date 7/9/02
LARRY JENSEN (Print Name)
SENIOR HEALTH PHYSICIST (Print Title)

For U.S. EPA Region V

Phase I Evaluation

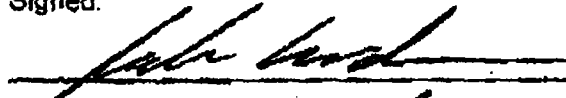
FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A.5-D.5, 14-15.5
Date of Verification Survey: 7-8-02
Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-8-02John Anderson

(Print Name)

Records Manager

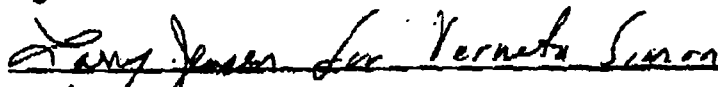
(Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 7/9/02LARRY JENSEN

(Print Name)

SENIOR HEALTH PHYSICIST

(Print Title)

For U.S. EPA Region V

Phase II Excavation 2

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-5-E, 13-14Date of Verification Survey: 7-8-02Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]Date 7-8-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02 The results of this survey indicate that the verification
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Larry Jensen for Pamela SimonDate 7/9/02LARRY JENSEN

(Print Name)

SENIOR HEALTH PHYSICIST

(Print Title)

For U.S. EPA Region V

Phase I EXCAVATION ZONE

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-8.5Date of Verification Survey: 6-11-02Time of Verification Survey 3:00 pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Andrew Date 6-11-02
John Andrew (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
6/12/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 6/12/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase I Excavation

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 2-6

Date of Verification Survey: 6-18-02

Time of Verification Survey 10:30 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed

[Signature]

Date 6-18-02

John Anderson

(Print Name)

Records

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke

Date 6/19/02

FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

PHASE I EXCLUSION ZONE

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification:

B-C, 6-9

Date of Verification Survey:

6-24-02

Time of Verification Survey

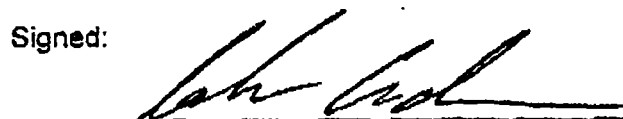
1:00 PM

am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 6-25-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 6/25/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 6/25/02Verneta Simon

(Print Name)

On Scene Coordinator

(Print Title)

For U.S. EPA Region V

Phase 2 Excavation 20

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 9-13Date of Verification Survey: 7-8-02Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]Date 7-8-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature]Date 7/9/02LARRY JENSEN

(Print Name)

SENIOR HEALTH PHYSICIST

(Print Title)

For U.S. EPA Region V

AREA IV PHASE I

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B.S-D, 23.5-25 EXCLUSION ZONE

Date of Verification Survey: 10-1-02

Time of Verification Survey 1:00pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]

Date 10-1-02

Todd Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature]

Date 10/2/02

Verneta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

Phase I Excavation 200

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-8.5
Date of Verification Survey: 6-11-02
Time of Verification Survey 3:00 pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Paul Date 6-11-02
John Paul (Print Name)
Racones Manager (Print Title)



STE Consultants, L.L.C.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
6/12/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 6/12/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

PHASE I EXCLUSION ZONE

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-D, 2-6
Date of Verification Survey: 6-24-02
Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 6-25-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c 6/25/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Verneta Simon Date 6/25/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

PHASE 2 Exclusion Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-D, 6-9
Date of Verification Survey: 6-24-02
Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 6-25-02
John Anderson (Print Name)
Records manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 6/25/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Veneta Simon Date 6/25/02
Veneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

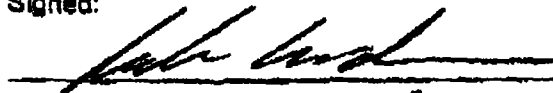
Phase I Exclusion Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYArea Identification: C-E, 9-11Date of Verification Survey: 7-8-02Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-8-02John Anderson

(Print Name)

Records Manager

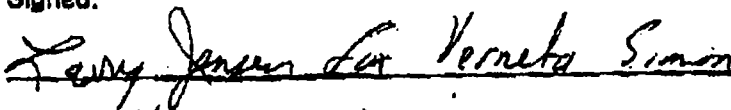
(Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation:

Signed:

Date 7/9/02LARRY JENSEN

(Print Name)

SENIOR HEALTH PHYSICIST

(Print Title)

For U.S. EPA Region V

Phase II Excavation Zone

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-E, 11-13
Date of Verification Survey: 7-8-02
Time of Verification Survey: 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 7-8-02
Tetta Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/9/02 2. The results of this survey indicate that the verificatio
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 7/9/02
LARRY JENSEN (Print Name)
SENIOR HEALTH PHYSICIST (Print Title)

For U.S. EPA Region V

Phase I Excl Zone

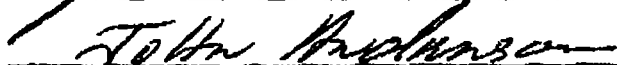
FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: D-E, 2-6
Date of Verification Survey: 6-24-02
Time of Verification Survey 1:00 pm am/pm

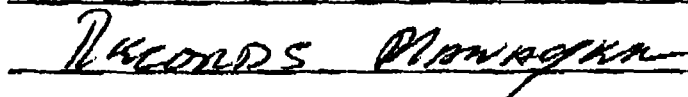
The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 6-25-02

(Print Name)



(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 6/25/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 6/25/02

(Print Name)



(Print Title)

For U.S. EPA Region V

Phase 2 Exc. Zone

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: D-E, 6-9Date of Verification Survey: 6-24-02Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John AndersonDate 6-25-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V (6/25/02). The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Venera SimonDate 6/25/02Venera Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

PHASE I EXCLUSION ZONE

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-F, 13.5-15
Date of Verification Survey: 8-7-02
Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Carl Date 8-8-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/8/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Verneta Simon Date 8/8/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYSite Identification: E-6, 1-3 Phase I FinalDate of Verification Survey: 8-8-02Time of Verification Survey: 1:30 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 8-8-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/9/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Verneta Simon Date 8/9/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

Phase 2 Excavation 202

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-6, 2-4Date of Verification Survey: 7-12-02Time of Verification Survey 10:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 7-12-02John Anderson (Print Name)Regions Manager (Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/12/02. The results of this survey indicate that the verificatio
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavatio

Signed:

Fredrick A. Micke Date 7/12/02FREDRICK A. MICKE (Print Name)ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase I Exclusion Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYArea Identification: E-6, 4-6Date of Verification Survey: 7-12-02Time of Verification Survey 10:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John AndersonDate 7-12-02John Anderson (Print Name)Records Manager (Print Title)STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c 7/12/02. The results of this survey indicate that the verification criteria as contained in the LAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. MickeDate 7/12/02FREDRICK A. MICKE (Print Name)ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase 2 Evaluation
2002FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYArea Identification: E-1, 6-8Date of Verification Survey: 7-12-02Time of Verification Survey 10:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-12-02John R. Anderson

(Print Name)

Donalds Manning

(Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/12/02. The results of this survey indicate that the verificatio
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavatio

Signed:

Date 7/12/02FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

Phase 2 Exclosure 20N4

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-6, S-10
 Date of Verification Survey: 7-12-02
 Time of Verification Survey: 10:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 7-12-02
Tattn Archerson (Print Name)
Rafaelos Monizgar (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/12/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 7/12/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase 2 Excavation Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-G/10-12
Date of Verification Survey: 7-22-02
Time of Verification Survey 9:30 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Dumais F. Guerin Date 7-22-02
DUMAIS F. GUERIN (Print Name)
Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/23/03. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 7/23/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase 2 Exclosure 202

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: 6-1 / 19-11

Date of Verification Survey: 7-22-02

Time of Verification Survey 9:05 (am)pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

DUMARAIIS F. GUERRA Date 7-22-02

DUMARAIIS F. GUERRA (Print Name)

Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/23/02. The results of this survey indicate that the verification
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 7/23/02

FREDRICK A. MICKE (Print Name)

ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

PHASE 2 EXCLUSION ZONE

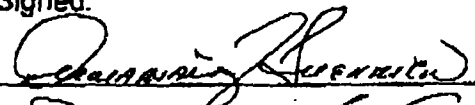
FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: G-1 / 11-13
Date of Verification Survey: 7-22-02
Time of Verification Survey 9:15 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

 Date 7-22-02
DONARAI'S F. GUERRA (Print Name)
Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/23/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Fredrick A. Micke Date 7/23/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Phase I Exclusion Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: G-1.5/2-4

Date of Verification Survey: 7-22-02

Time of Verification Survey 9:25 (am/pm)

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Domenic J. Guernier Date 7-22-02

Domenic J. Guernier (Print Name)

Sr. Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c 7/23/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Fredrick A. Micke Date 7/23/02

FREDRICK A. MICKE (Print Name)

ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

AREA I + II
PHASE I EXCLUSION ZONE

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: G-H.5, 20-24.5 EXCLUSION ZONEDate of Verification Survey: 9-30-02Time of Verification Survey 1:00pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02

Todd Anderson (Print Name)

Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/1/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Larry Jensen for Verneka Simon Date 10/1/02

Larry Jensen (Print Name)

Senior Health Physicist (Print Title)

For U.S. EPA Region V

Phase II Exclusion zone

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: 6-1.5, 4-6Date of Verification Survey: 7-23-02Time of Verification Survey 8:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-23-02John Anderson

(Print Name)

Records Manager

(Print Title)



STB Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V :
7/23/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 7/23/02FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

Phase 2 Excavation
Zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: 6-E-5, 6-8

Date of Verification Survey: 7-23-02

Time of Verification Survey 8:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]

Date 7-23-02

Talvin Anderson

(Print Name)

Records Manager

(Print Title)



SES Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/23/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Fredrick A. Micke

Date 7/23/02

FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

Phase II Exclusion zone

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: G-1.5/8-9

Date of Verification Survey: 7-22-02

Time of Verification Survey 9:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Dumais F. Guerin Date 7-22-02

DUMAIS F. GUERIN (Print Name)

Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/23/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Fredrick A. Micke Date 7/23/02

FREDRICK A. MICKE (Print Name)

ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

AREA I + IV
PHASE I EXCLUSION ZONE

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: L-H.5, 20-24.5 EXCLUSION ZONEDate of Verification Survey: 9-30-02Time of Verification Survey 1:00pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
Todd Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/1/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Larry Jensen for Verneta Simon Date 10/1/02
Larry Jensen (Print Name)
Senior Health Physicist (Print Title)

For U.S. EPA Region V

Phase 2 EXCLUSION ZONE

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: H-19 Samples 1-5

Date of Verification Survey: 8-1-02

Time of Verification Survey 8:00am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

signed:

[Signature] Date 8-1-02

[Signature] (Print Name)

[Signature] (Print Title)



STS Consulting, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

signed:

[Signature] Date 8/2/02

Verneta Simon

For U.S. EPA Region V

Phase 2 Excavation Zone

FORM 223-1

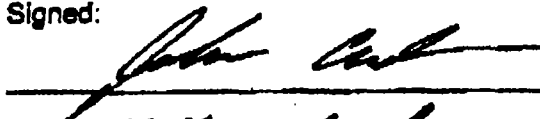
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: H-I, 8-10Date of Verification Survey: 8-7-02Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 8-8-02John Anderson

(Print Name)

Records Manager

(Print Title)

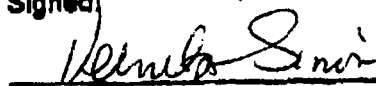


STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/8/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Date 8/8/02Verneta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

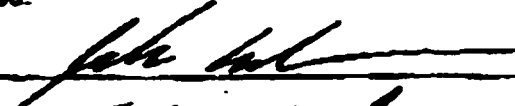
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-J.5, 9-12 ^{Phase II Area II} Exclusion Zone
Date of Verification Survey: 8-21-02
Time of Verification Survey 9:00am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

 Date 8-21-02
John Parkinson (Print Name)
Records Manager (Print Title)




STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/21/02. The results of this survey indicate that the verification criteria as contained in the LIAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

 Date 8/21/02
Veerata Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

Phase II Exclusion Zone



Phase IV Exclusion Zone

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-A.5, 2.5-3.5

Date of Verification Survey: 8-7-02

Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson

Date 8-8-02

John Anderson (Print Name)

Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V, 8/8/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Veneta Simon

Date 8/8/02

Veneta Simon (Print Name)

On-Scene Coordinator (Print Title)

For U.S. EPA Region V

Phase II Excavation Zone

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-F, 1-2.5

Date of Verification Survey: 8-7-02

Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Carl Date 8-8-02

John Anderson (Print Name)

Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/8/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Veneta Simon Date 8/9/02

Veneta Simon (Print Name)

On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-F, 13.5-15 *Phon II*
Date of Verification Survey: 8-7-02 *Excav*
Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed.

John Anderson Date 8-8-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V (8/8/02). The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed.

Veneta Simon Date 8/8/02
Veneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: H-I, E-10 Phase II
Date of Verification Survey: 8-7-02 Excavation
Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 8-8-02
Todd Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V (8/8/02). The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

[Signature] Date 8/8/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V:

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-15, 9-12 ^{PHASE II AREA II} EXCLUSION ZONEDate of Verification Survey: 8-21-02Time of Verification Survey 9:00am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]Date 8-21-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/21/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature]Date 8/21/02Veneta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

II DKG
AREA III Phase II

Area Identification: F-6, 17.5-19 EXCLUSION ZONE

Date of Verification Survey: 9-19-02

Time of Verification Survey 12:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 9-20-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/20/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Venerata Simon Date 9/20/02
Venerata Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

Phase II E2

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-5-K, 7.5-11 AREA II PHASE I
EXCAVATION ZONE

Date of Verification Survey: 8-26-02

Time of Verification Survey 8:30 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 8-26-02

John Anderson (Print Name)

Excavation Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on Aug. 27, 2002. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 8/27/02

FREDRICK A. MICKE (Print Name)

ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

✓

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

AREA III, Phase II

Area Identification: L-5-N, 7-10.5 Excavation ZoneDate of Verification Survey: 9-11-02Time of Verification Survey 9:00 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]Date 9-11-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.

Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/11/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. MickeDate 9/11/02FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: L-L.75, 5.75-6.5 Area III
Phase II E.Z.
Date of Verification Survey: 9-5-02
Time of Verification Survey: 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 9-5-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/5/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 9/5/02
Veronica Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

✓

Phase II Final



FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-B, 1-15 Area I, Phase II Final

Date of Verification Survey: 8-7-02

Time of Verification Survey 2:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson

Date 8-8-02

John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c 8/8/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Verneta Simon

Date 8/8/02

Verneta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-B, 15-21 Area I, Phase II FinalDate of Verification Survey: 8-8-02Time of Verification Survey 1:30 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed

[Signature]Date 8-8-02Todd Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/9/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed

[Signature]Date 8/9/02Vernita Simon

(Print Name)

On-Site Coordinator

(Print Title)

for U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A.C.5, 21-22 AREA II PHASE II FINAL SAND
Date of Verification Survey: 9-30-02
Time of Verification Survey: 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
Todd Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/1/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 10/1/02
Larry Jensen (Print Name)
Senior Health Physicist (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-D, 22-25 AREA II PHASE II
FINAL SANDDate of Verification Survey: 10-1-02Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
Todd Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 10/2/02
Veronica Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: A-D, 25-27 ARCH II PHASE II
FINAL SAND
 Date of Verification Survey: 9.30.02
 Time of Verification Survey 1:00pm am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V o
10/1/02. The results of this survey indicate that the verification
 criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 10/1/02
Larry Jensen (Print Name)
Senior Health Physicist (Print Title)

For U.S. EPA Region V



FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area E District II French

Area Identification: B-C, 1-12 (Smo)Date of Verification Survey: 7-26-02

Time of Verification Survey _____ am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 8-28-02

(Print Name)

(Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/28/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 8/28/02

(Print Name)

(Print Title)

For U.S. EPA Region V

FORM 223-1

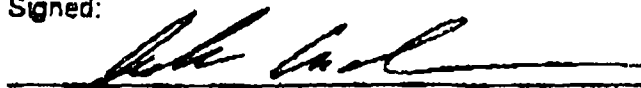
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 6-12 (10) AREA E, Phase II FinalDate of Verification Survey: 7-26-02Time of Verification Survey 11:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-30-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/30/02. The results of this survey indicate that the verificatio
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavatio

Signed:

Date 7/30/02Veneeta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 6-12 (B) MAIN I Phase II
 Date of Verification Survey: 7-26-02
 Time of Verification Survey: 11:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA

Signed

[Signature] Date 7-30-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA Region V on 7/30/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 7/30/02
Veneta J. Simon (Print Name)
On-Scene Coordinator (Print Title)

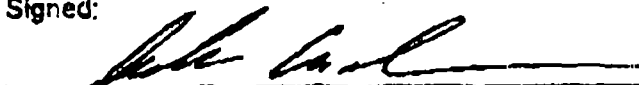
For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEYArea Identification: B-C, 1-6 (C) AREA 2, PHASE II FINALDate of Verification Survey: 7-26-02Time of Verification Survey 11:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Date 7-30-02John Anderson

(Print Name)

Records Manager

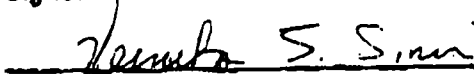
(Print Title)

STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
7/30/02. The results of this survey indicate that the verificatio
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavatio

Signed:

Date 7/30/02Veeneta S. Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 12-16 Phase I, Phase II Final
Date of Verification Survey: 8-1-02
8:00 am am/pm

The area surveyed at the time and date indicated above. The
material has been removed as required by the Site Removal Action

Documents are attached for review and approval by the U.S. EPA.

Signed

John Anderson Date 8-1-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Corporation, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Veneta Simon Date 8/2/02
Veneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-C, 16-21 AREA II, Phase II Final

Date of Verification Survey: 8-1-02

Time of Verification Survey 8:00 am am/pm ✓

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 8-1-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
8/2/02. The results of this survey indicate that the verificati
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Verneta Simon Date 8/2/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-6, 1-10 (A) Area I, Phase II FinalDate of Verification Survey: 7-26-02Time of Verification Survey 11:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA

Signed:

Date 7-30-02John Anderson

(Print Name)

Records Manager

(Print Title)

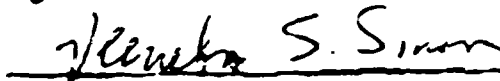


STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/30/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 7/30/02Veerana J. Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-E, 1-10 (B) AREA I, Phase II FinalDate of Verification Survey: 7-26-02Time of Verification Survey 11:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John AndersonDate 7-30-02John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 7/31/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed:

Vaneta S. SimonDate 7/31/02Vaneta S. Simon

(Print Name)

On Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification:

C-E, I-R AREA PHASE II FINAL
(SAND)

Date of Verification Survey:

7-23-02

Time of Verification Survey

am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson

Date 8-28-02

John Anderson

(Print Name)

Regional Manager

(Print Title)



STS Consultants, Ltd.
 Builders through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/28/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke

Date 8/28/02

FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

**FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY**

Area Identification: C-E, 10-21 *Area 10-21 Phase II Final (SRIID)*

Date of Verification Survey: 8-30-02

Time of Verification Survey 9:00 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 8-30-02

John Anderson (Print Name)

Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/30/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Venera Simon Date 8/30/02

Venera Simon (Print Name)

On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: C-5-12, 21-22 AREA II PHASE II FINAL SAND

Date of Verification Survey: 10-1-02

Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
Todd Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/2/02. The results of this survey indicate that the verification criteria contained in the UAO have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 10/2/02
Yvonne Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: D-6, 22-24.5 AR 111 Phase II Final Sand

Date of Verification Survey: 10-1-02

Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 10-1-02
Tobin Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 10/2/02
Venera Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: D-5/24.5-27 (Area V Final Sand)
Date of Verification Survey: 9-25-02
Time of Verification Survey: 9:30 am

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA

Signed:

Diana J. Sullivan Date 9-27-02
Diana J. Sullivan (Print Name)
Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/27/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Venerata Simon Date 9/27/02
Venerata Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-G, 1-3 Phase II FINALDate of Verification Survey: 8-8-02Time of Verification Survey: 1:30 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 8-8-02
John Anderson (Print Name)
RECONNS MANAGER (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/9/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 8/9/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-6, 3-7 AREA I Phase II Final

Date of Verification Survey: 8-1-02

Time of Verification Survey 8:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed

John Anderson Date 8-1-02

John Anderson (Print Name)

Process Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c
8/1/02. The results of this survey indicate that the verificatic
criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed

Yeeneta Simon Date 8/1/02

Yeeneta Simon (Print Name)

On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-6, 7-11 Area E, Phase II Final

Date of Verification Survey: 8-1-02

Time of Verification Survey 8:00am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 8-1-02
John Anderson (Print Name)
Reones Monaghan (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V c 8/2/02. The results of this survey indicate that the verificatic criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavatio

Signed:

Verneta Simon Date 8/2/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-G, 11-21 Area I Phase II Final
Date of Verification Survey: 8-21-02
Time of Verification Survey: 9:00 am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 8-21-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/21/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 8/21/02
Vernita Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

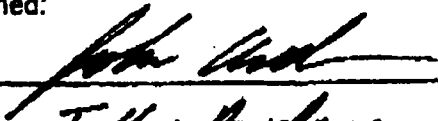
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: B-I, 1-15 AREA Phase II FinalDate of Verification Survey: 8-8-02Time of Verification Survey 1:30 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

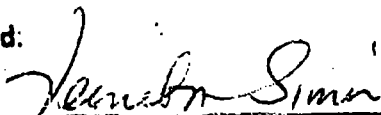
Signed:

Date 8-8-02John Anderson (Print Name)Records Manager (Print Title)STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/9/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Date 8/9/02Verneta Simon (Print Name)On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: 12-V, 15-20 Area I, Phase II
Date of Verification Survey: 8-14-02 Final
Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

Signed: *John M. [Signature]* Date *8-14-02*
John M. [Signature] (Print Name)
Records Manager (Print Title)



STB Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/15/62. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Vivetta Simon Date 8/15/62
Vivetta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification:

6-I, 20-24.5AREA I +
AREA II PHASE II
FINAL SAND

Date of Verification Survey:

10-1-02

Time of Verification Survey

1:00 PM

am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature]Date 10-1-02John Anderson

(Print Name)

Regional Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/2/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature]Date 10/2/02Veneta Simon

(Print Name)

On-Scene Coordinator

(Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-I, 21-24.5 AREA II Pitase II
Final SAND

Date of Verification Survey: 9-30-02

Time of Verification Survey 1:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 10-1-02
John Anderson (Print Name)
Racquel Monagan (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 10/1/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Larry Jensen for Verne Simon Date 10/1/02
Larry Jensen (Print Name)
Senior Health Physicist (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-7.5, 1-9.5 *ARM II PHASE II Final*
(SAND)

Date of Verification Survey: 8-26-02

Time of Verification Survey 8:30 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 8-28-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/28/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 8/28/02
FREDRICK A. MICKE (Print Name)
ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

Memo

To: Rich Berggreen, STS Consultants-Project Coordinator
From: Glenn Huber
CC: John Anderson, Records Manager
Date: 08/28/02
Re: EPA Phase II Sand Samples - 341 E. Ohio Street

Rich:

Attached is a corrected copy of the NUTRANL Gamma Spec Report from August 26, 2002. The following (3) Phase II sand samples were inadvertently recorded as "1.5-J.5":

<u>Sample Date</u>	<u>Description</u>
8/28/02	S1434 I-J.5/1-4
8/28/02	S1435 I-J.5/4-7
8/28/02	S1436 I-J.5/7-9.5

These samples and surveys were performed by USEPA, but were recorded in our sample log and chain of custody incorrectly. As a result, Form 223-1 was submitted after sample analysis requesting an incomplete release of the area. This form will need to be resent in order correct this error and obtain proper release. I have already forwarded a copy of this memo and the corrected analysis report to John Anderson so he can contact the USEPA.

Thanks,

Glenn Huber

Nutranl Gamma Spec Report- 341 East Ohio Street Site

Corrected Copy 8/28/02 GAH

Exclusion Zone Confirmatory Samples for August 26, 2002

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty
763	8/26/02	EPA	S1437 I.5-K/9.5-11 EPA#1	36.4	4.52	1.39	-0.5	0.38	0.96	0.51	0.46	0.636003145
764	8/26/02	EPA	S1438 I.5-K/9.5-11 EPA#2	37.5	-0.64	2.11	0.6	0.63	1.44	0.84	2.04	1.05
765	8/26/02	EPA	S1439 I.5-K/9.5-11 EPA#3	37.7	-1.35	2.22	0.11	0.65	2.13	0.91	2.24	1.118302285
766	8/26/02	EPA	S1440 I.5-K/9.5-11 EPA#4	36.4	-1.26	1.64	0.91	0.48	1.11	0.64	2.02	0.8
767	8/26/02	EPA	S1441 I.5-K/9.5-11 EPA#5	37.2	1.88	2.15	0.16	0.61	1.37	0.83	1.53	1.030048543

Average Total Radium (Th-232+Ra-226) Concentration for : I.5-K / 9.5-11 = 1.66 pCi/g

Correct
no
changes
needed

Phase II Sand Samples 8/26/02

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty
760	8/26/02	EPA Sand	S1434 I-J.5/1-4	35.1	-1.32	1.98	0.05	0.59	1.78	0.82	1.83	1.010198
761	8/26/02	EPA Sand	S1435 I-J.5/4-7	35.8	-0.38	1.71	0.19	0.5	0.66	0.67	0.85	0.836002392
762	8/26/02	EPA Sand	S1436 I-J.5/7-9.5	34.4	-2.94	1.49	0.5	0.44	-0.25	0.58	0.25	0.728010989

★

Nutranl Gamma Spec Report- 341 East Ohio Street Site

Exclusion Zone Confirmatory Samples for August 28, 2002

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty
763	8/28/02	EPA	S1437 I.5-K/9.5-11 EPA#1	36.4	4.52	1.39	-0.5	0.38	0.96	0.51	0.46	0.838003145
764	8/28/02	EPA	S1438 I.5-K/9.5-11 EPA#2	37.5	-0.64	2.11	0.6	0.63	1.44	0.84	2.04	1.05
765	8/28/02	EPA	S1439 I.5-K/9.5-11 EPA#3	37.7	-1.35	2.22	0.11	0.65	2.13	0.91	2.24	1.118302285
766	8/28/02	EPA	S1440 I.5-K/9.5-11 EPA#4	36.4	-1.28	1.84	0.91	0.48	1.11	0.64	2.02	0.8
767	8/28/02	EPA	S1441 I.5-K/9.5-11 EPA#5	37.2	1.88	2.15	0.16	0.61	1.37	0.83	1.53	1.030048543
Average Total Radium (Th-232+Ra-226) Concentration for : I.5-K / 9.5-11 = 1.66 pCi/g												

Phase II Sand Samples 8/28/02

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty
760	8/28/02	EPA Sand	S1434 I.5-J.5/1-4	35.1	-1.32	1.98	0.05	0.59	1.78	0.82	1.83	1.010198
761	8/28/02	EPA Sand	S1435 I.5-J.5/4-7	35.8	-0.38	1.71	0.19	0.5	0.66	0.67	0.85	0.838002392
762	8/28/02	EPA Sand	S1436 I.5-J.5/7-9.5	34.4	-2.94	1.49	0.5	0.44	-0.25	0.58	0.25	0.728010989

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: I-L, 9.5-11 Area II Phase II Final
STNDDate of Verification Survey: 8-30-02Time of Verification Survey 9:00am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 8-30-02
Tisha Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/30/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 8/30/02
Veronica Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: Area 2 - 11, Phase II
I-6, 11-17.5 Final (Sand)

Date of Verification Survey: 7-5-02

Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 7-5-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/6/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 9/6/02
Verneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area II Phase II Final

Area Identification: I-5 - I-5, 1-9.5

Date of Verification Survey: 8-26-02

Time of Verification Survey 8:30 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA

Signed:

John Anderson

Date 8-26-02

John Anderson

(Print Name)

Records Manager

(Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on Aug. 27, 2002. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke

Date 8/27/02

FREDRICK A. MICKE

(Print Name)

ON-SCENE COORDINATOR

(Print Title)

For U.S. EPA Region V

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FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: J-N / 21-27 (ACENT Final sand)Date of Verification Survey: 7-25-02Time of Verification Survey 2:00 ampm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

DUMARIS J. GUERRIN Date 7-25-02
DUMARIS J. GUERRIN (Print Name)
Site Coordinator (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/27/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Venera Simon Date 9/27/02
Venera Simon (Print Name)
On-Site Coordinator (Print Title)

For U.S. EPA Region V

✓

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: J-5-L, 1-9.5 ^{Area 2 Phase 2 Final} (SAND)Date of Verification Survey: 8-30-02Time of Verification Survey 9:00 am am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Cal Date 8-30-02*John Anderson* (Print Name)*Records Manager* (Print Title)

STS Consultants, Ltd.
Solutions Through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 8/30/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Verneta Simon Date 8/30/02*Verneta Simon* (Print Name)*On-Scene Coordinator* (Print Title)

For U.S. EPA Region V

FORM 223-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: E-N, I-5 Final (Same) ALBIA III, Phase II

Date of Verification Survey: 9-5-02

Time of Verification Survey 9:00 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Carlson Date 9-5-02
John Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
 Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/6/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Veneta Simon Date 9/6/02
Veneta Simon (Print Name)
On-Scene Coordinator (Print Title)

For U.S. EPA Region V

FORM 221-1

NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: L-N, 5-11 AREA II Phase II
FINE (SAND)Date of Verification Survey: 9-11-02Time of Verification Survey 9:00 AM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

John Anderson Date 9-11-02John Anderson (Print Name)Records Manager (Print Title)STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/11/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

Fredrick A. Micke Date 9/11/02FREDRICK A. MICKE (Print Name)ON-SCENE COORDINATOR (Print Title)

For U.S. EPA Region V

FORM 223-1
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY

Area Identification: L-N, 11-21 & T-4, 12-21 AREA II Phase II Final (SAND)

Date of Verification Survey: 9-19-02

Time of Verification Survey 12:00 PM am/pm

The above-described excavation was surveyed at the time and date indicated above. The survey indicated that all soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to this survey are attached for review and approval by the U.S. EPA.

Signed:

[Signature] Date 9-20-02
Terry Anderson (Print Name)
Records Manager (Print Title)



STS Consultants, Ltd.
Solutions through Science & Engineering

The attached Verification Survey documents were reviewed by U.S. EPA, Region V on 9/20/02. The results of this survey indicate that the verification criteria as contained in the UAO, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation

Signed:

[Signature] Date 9/20/02
Vernon Simon (Print Name)
On Scene Coordinator (Print Title)

For U.S. EPA Region V

APPENDIX F

USEPA Signed Notification of Successful Verification Sampling Forms - Pesticide



Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:08/19/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)
F-4-VP	07/26/2002	14:30	base	0.534
F-6-VP	07/26/2002	14:35	base	0.437
F-10-VP	07/26/2002	14:50	base	0.068

Notes:

- 1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

AUG-28-2002 12:58

STS Consultants, Ltd.

847 279 2535 P.02/03

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDE

Project Name/Number: 341 East Ohio Street, Chicago, Illinois

Area Identification: F-4-VIP

Date of Verification Survey: 7/24/02

Time of Verification Survey: 2:30 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]

Date: 8/14/02

Print Name: Steve C. Komder

Print Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta Simon

Date: 8/24/02

Print Name: Verneta Simon

Print Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F4-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-001 Work Order #....: E5M441AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:05
Dilution Factor: 20
% Moisture.....: 10 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	38	ug/kg
Heptachlor epoxide	ND	38	ug/kg
Aldrin	ND	38	ug/kg
Chlordane (technical)	ND	380	ug/kg
alpha-BHC	ND	38	ug/kg
gamma-BHC (Lindane)	ND	38	ug/kg
4,4'-DDT	ND	38	ug/kg
Dieldrin	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-6-VPDate of Verification Survey: 7/24/02Time of Verification Survey: 2:35 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/13/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan, (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Veneta SimonDate: 8/20/02Print Name: Veneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F6-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-002 Work Order #....: E5M5M1AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:24
Dilution Factor: 20
% Moisture.....: 10 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	38	ug/kg
Heptachlor epoxide	ND	38	ug/kg
Aldrin	ND	38	ug/kg
Chlordane (technical)	ND	380	ug/kg
alpha-BHC	ND	38	ug/kg
gamma-BHC (Lindane)	ND	38	ug/kg
4,4'-DDT	ND	38	ug/kg
Dieldrin	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: K-10-1PDate of Verification Survey: 7/26/02Time of Verification Survey: 2:50 am/pm am

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Shane C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/29/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation:

Signed: [Signature]Date: 8/20/02Print Name: Veronica SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F10-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-003 Work Order #....: E5M6F1AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:43
Dilution Factor: 20
% Moisture.....: 6.8 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Heptachlor	ND	36	ug/kg
Heptachlor epoxide	ND	36	ug/kg
Aldrin	ND	36	ug/kg
Chlordane (technical)	ND	360	ug/kg
alpha-BHC	ND	36	ug/kg
gamma-BHC (Lindane)	ND	36	ug/kg
4,4'-DDT	ND	36	ug/kg
Dieldrin	ND	36	ug/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:08/19/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)
F-8	7/31/02	8:30	base	0.005
H-6	7/31/02	8:45	base	1.48
H-10	7/31/02	9:15	base	0.157
H-12	7/31/02	9:45	base	0.804

Notes:

- 1 - Sample location is the center point of the 10 X 10 meter grid for base of excavation samples
The location designation for vertical samples indicates the actual sample location
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area)
Sidewall - Vertical composite of five grab samples from excavation side wall
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes
such as heptachlor refer to method documentation for information on the relative sensitivities

H-6 Exceeded cleanup level in laboratory analysis Resubmitted October 16 2002 after further excavation

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-8Date of Verification Survey: 7/3/02Time of Verification Survey: 8:30 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 8/20/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-8

GC Semivolatiles

Lot-Sample #....: F2H010233-001 Work Order #....: E5QGC1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 08:30 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 02:28
Dilution Factor: 20
% Moisture.....: 5.2 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	36	ug/kg
Heptachlor epoxide	ND	36	ug/kg
Aldrin	ND	36	ug/kg
Chlordane (technical)	ND	360	ug/kg
alpha-BHC	ND	36	ug/kg
gamma-BHC (Lindane)	ND	36	ug/kg
4,4'-DDT	ND	36	ug/kg
Dieldrin	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-10Date of Verification Survey: 7/31/02Time of Verification Survey: 9:15 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KorderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 36 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 8/20/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-10

GC Semivolatiles

Lot-Sample #....: F2H010233-003 Work Order #....: E5QGH1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 09:15 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 03:06
Dilution Factor: 20
% Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	42	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-12Date of Verification Survey: 7/31/02Time of Verification Survey: 9:45 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 8/20/02Print Name: Vernon SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-12

GC Semivolatiles

Lot-Sample #....: F2H010233-004 Work Order #....: E5QGJ1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 09:45 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 03:25
Dilution Factor: 20
% Moisture.....: 12 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	39	ug/kg
Heptachlor epoxide	ND	39	ug/kg
Aldrin	ND	39	ug/kg
Chlordane (technical)	ND	390	ug/kg
alpha-BHC	ND	39	ug/kg
gamma-BHC (Lindane)	ND	39	ug/kg
4,4'-DDT	ND	39	ug/kg
Dieldrin	ND	39	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary
341 East Ohio Street

Date:08/19/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay
H-4	08/01/2002	13:30	base	0.004
H-8	08/01/2002	13:40	base	0.009

Notes:

- 1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-4Date of Verification Survey: 8/10/02Time of Verification Survey: 1:30 am/pm am

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KorndorPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Venera S. SimonDate: 8/20/02Print Name: Venera J. SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-4

GC Semivolatiles

Lot-Sample #....: F2H020131-001 Work Order #....: E5R4G1AA Matrix.....: SOLID
Date Sampled....: 08/01/02 13:30 Date Received...: 08/02/02
Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
Prep Batch #....: 2217113 Analysis Time...: 02:40
Dilution Factor: 20
% Moisture.....: 3.6 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Heptachlor	ND	35	ug/kg
Heptachlor epoxide	ND	35	ug/kg
Aldrin	ND	35	ug/kg
Chlordane (technical)	ND	350	ug/kg
alpha-BHC	ND	35	ug/kg
gamma-BHC (Lindane)	ND	35	ug/kg
4,4'-DDT	ND	35	ug/kg
Dieldrin	ND	35	ug/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street Chicago, IllinoisArea Identification: H-8Date of Verification Survey: 8/1/02Time of Verification Survey: 1:40 am pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KoriderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Venereta SimonDate: 8/20/02Print Name: Venereta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-8

GC Semivolatiles

Lot-Sample #....: F2H020131-002 Work Order #....: E5R4J1AA Matrix.....: SOLID
Date Sampled....: 08/01/02 13:40 Date Received...: 08/02/02
Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
Prep Batch #....: 2217113 Analysis Time...: 02:59
Dilution Factor: 20
% Moisture.....: 3.5 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	35	ug/kg
Heptachlor epoxide	ND	35	ug/kg
Aldrin	ND	35	ug/kg
Chlordane (technical)	ND	350	ug/kg
alpha-BHC	ND	35	ug/kg
gamma-BHC (Lindane)	ND	35	ug/kg
4,4'-DDT	ND	35	ug/kg
Dieldrin	ND	35	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary
341 East Ohio Street

Date: 08/19/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay
I-2	08/02/2002	14:30	sidewall	0.009
I-4	08/02/2002	14:35	sidewall	0.246
I-6	08/02/2002	14:40	sidewall	0.246

Notes:

- 1 - Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: T-2 (sidewalk composite)Date of Verification Survey: 8/2/02Time of Verification Survey: 2:30 am/pm am

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for Ingestion and Inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 8/20/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: I-2

GC Semivolatiles

Lot-Sample #....: F2H050168-001 Work Order #....: E5XM31AA Matrix.....: SOLID
Date Sampled....: 08/02/02 14:30 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/12/02
Prep Batch #....: 2220226 Analysis Time...: 15:57
Dilution Factor: 20
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	41	ug/kg
Heptachlor epoxide	ND	41	ug/kg
Aldrin	ND	41	ug/kg
Chlordane (technical)	ND	410	ug/kg
alpha-BHC	ND	41	ug/kg
gamma-BHC (Lindane)	ND	41	ug/kg
4,4'-DDT	ND	41	ug/kg
Dieldrin	ND	41	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDE

Project Name/Number: 341 East Ohio Street, Chicago, Illinois

Area Identification: I-4 (sidewalk composite)

Date of Verification Survey: 8/2/02

Time of Verification Survey: 2:35 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]

Date: 8/19/02

Print Name: Steve C. Kornder

Print Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Veeneta Simon

Date: 8/20/02

Print Name: Veeneta Simon

Print Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-4

GC Semivolatiles

Lot-Sample #....: F2H050168-002 Work Order #....: E5XM81AA Matrix.....: SOLID
Date Sampled....: 08/02/02 14:35 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
Prep Batch #....: 2220226 Analysis Time...: 03:55
Dilution Factor: 20
% Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	40	ug/kg
Heptachlor epoxide	ND	40	ug/kg
Aldrin	ND	40	ug/kg
Chlordane (technical)	ND	400	ug/kg
alpha-BHC	ND	40	ug/kg
gamma-BHC (Lindane)	ND	40	ug/kg
4,4'-DDT	ND	40	ug/kg
Dieldrin	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: I-6 (side wall composite)Date of Verification Survey: 8/2/02Time of Verification Survey: 2:40 am/pm pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 8/19/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 8/20/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 8/29/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-6

GC Semivolatiles

Lot-Sample #....: F2H050168-003 Work Order #....: E5XNA1AA Matrix.....: SOLID
Date Sampled....: 08/02/02 14:40 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
Prep Batch #....: 2220226 Analysis Time...: 04:14
Dilution Factor: 20
% Moisture.....: 18 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	49	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	42	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:09/3/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)
H-14	08/14/2002	14:30	base	0.000
F-16	08/20/2002	13:00	base	0.007
F-18	08/20/2002	13:10	base	0.084
F-21	08/20/2002	13:40	sidewall	0.874
F-14	08/20/2002	13:20	sidewall	0.719
I-16	08/20/2002	10:45	sidewall	0.486
I-18	08/20/2002	11:00	sidewall	0.008

Notes:

1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.

The location designation for vertical samples indicates the actual sample location.

2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).

Sidewall - Vertical composite of five grab samples from excavation side wall.

3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-14Date of Verification Survey: 8/14/02Time of Verification Survey: 2:30 and 3:00

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/6/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-14

GC Semivolatiles

Lot-Sample #....: F2H200218-002 Work Order #....: E6VCK1AA Matrix.....: SOLID
Date Sampled....: 08/19/02 14:30 Date Received...: 08/20/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 16:46
Dilution Factor: 1
% Moisture.....: 5.4 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	0.70 J, COL	7.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-16Date of Verification Survey: 8/24/02Time of Verification Survey: 1:00 am pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomlerPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/6/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-16

GC Semivolatiles

Lot-Sample #....: F2H210313-006 Work Order #....: E60KJ1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:00 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 21:09
Dilution Factor: 1
% Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	0.59 J, COL	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.8	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	70	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-18Date of Verification Survey: 8/20/02Time of Verification Survey: 1:10 ampm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Venera SimonDate: 9/6/02Print Name: Venera SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-18

GC Semivolatiles

Lot-Sample #....: F2H210313-007 Work Order #....: E60KK1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:10 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 21:39
Dilution Factor: 1
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	1.0 J	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	ND	2.1	ug/kg
Heptachlor epoxide	ND	8.1	ug/kg
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Decachlorobiphenyl	77	(50 - 151)	
Tetrachloro-m-xylene	97	(64 - 131)	

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-2.1 (sidewalk compost)Date of Verification Survey: 8/20/02Time of Verification Survey: 1:40 am pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation?

Signed: Veneta SimonDate: 9/6/02Print Name: Veneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-21

GC Semivolatiles

Lot-Sample #....: F2H210313-004 Work Order #....: E60KG1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:40 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 20:11
Dilution Factor: 5
% Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	ND	2.1	ug/kg
Heptachlor epoxide	5.2 J, COL	8.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: F-14 (sidewalk composite)Date of Verification Survey: 8/20/02Time of Verification Survey: 1:20 am/pm (pm)

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/6/02Print Name: Veneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

GC Semivolatiles

Lot-Sample #....: F2H210313-005 Work Order #....: E60KH1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:20 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 20:40
Dilution Factor: 5
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	4.6 J	8.1	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: I-16 (sidewalk composite)Date of Verification Survey: 8/20/02Time of Verification Survey: 10:45 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: Steve C. KomderDate: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/6/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-16

GC Semivolatiles

Lot-Sample #....: F2H210313-002 Work Order #....: E60KE1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 10:45 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 19:13
Dilution Factor: 5
% Moisture.....: 16 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	68 COL	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	5.0	2.0	ug/kg
Heptachlor	3.7	2.0	ug/kg
Heptachlor epoxide	ND	7.9	ug/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: I-18 (backfill composite)Date of Verification Survey: 8/20/02Time of Verification Survey: 11:00 am ☒ pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the SRS Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/6/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (ST8, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/6/02Print Name: Vereneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-18

GC Semivolatiles

Lot-Sample #....: F2H210313-003 Work Order #....: E60KF1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 11:00 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 19:42
Dilution Factor: 5
% Moisture.....: 7.7 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:09/3/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)
H16	08/23/2002	13:50	base	0.001
H18	08/23/2002	13:40	base	0.036
D½-16	08/23/2002	13:45	vertical	0.019
D½-18	08/23/2002	13:50	vertical	0.05
D½-20	08/23/2002	13:55	vertical	0.734
J½-8	08/23/2002	14:00	vertical	0.009

Notes:

- 1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-16Date of Verification Survey: 8/23/02Time of Verification Survey: 1:50 am/pm?

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/4/02Print Name: Verneta SimonPrint Title: on-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-16

GC Semivolatiles

Lot-Sample #....: F2H280172-001 Work Order #....: E7A8FLAA Matrix.....: SOLID
 Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 13:16
 Dilution Factor: 1
 % Moisture.....: 12 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.6	ug/kg
Endrin	ND	1.9	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	64	(50 - 151)
Tetrachloro-m-xylene	76	(64 - 131)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: H-18Date of Verification Survey: 8/23/02Time of Verification Survey: 1:40 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Veeneta SimonDate: 9/4/02Print Name: Veeneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-18

GC Semivolatiles

Lot-Sample #....: F2H280172-002 Work Order #....: E7A8N1AA Matrix.....: SOLID
 Date Sampled....: 08/23/02 13:40 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 13:59
 Dilution Factor: 5
 % Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	9.7	ug/kg
alpha-BHC	ND	9.7	ug/kg
gamma-BHC (Lindane)	ND	9.7	ug/kg
Chlordane (technical)	ND	97	ug/kg
4,4'-DDT	ND	9.7	ug/kg
Dieldrin	ND	9.7	ug/kg
Heptachlor	12	9.7	ug/kg
Heptachlor epoxide	5.8 J	38	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: D12-16 (vertical/composite)Date of Verification Survey: 8/23/02Time of Verification Survey: 1:45 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: Steve C. KomderDate: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/4/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D-5-16

GC Semivolatiles

Lot-Sample #....: F2H280172-JC3 Work Order #....: E7A8P1AA Matrix.....: SOLID
 Date Sampled....: 08/23/02 13:45 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 14:13
 Dilution Factor: 1
 % Moisture.....: 22 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	0.82 J	2.2	ug/kg
alpha-BHC	0.76 J	2.2	ug/kg
gamma-BHC (Lindane)	ND	2.2	ug/kg
Chlordane (technical)	ND	22	ug/kg
4,4'-DDT	ND	2.2	ug/kg
Dieldrin	0.81 J	2.2	ug/kg
Heptachlor	1.5 J, COL	2.2	ug/kg
Heptachlor epoxide	ND	8.6	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	88	(50 - 151)
Tetrachloro-m-xylene	69	(64 - 131)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: D12-18 (vertical composite)Date of Verification Survey: 8/23/02Time of Verification Survey: 1:50 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/4/02Print Name: Veronica SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-18

GC Semivolatiles

Lot-Sample #....: F2H280172-004 Work Order #....: E7A8T1AA Matrix.....: SOLID
 Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 14:27
 Dilution Factor: 10
 % Moisture.....: 20 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	21	ug/kg
alpha-BHC	ND	21	ug/kg
gamma-BHC (Lindane)	ND	21	ug/kg
Chlordane (technical)	ND	210	ug/kg
4,4'-DDT	ND	21	ug/kg
Dieldrin	ND	21	ug/kg
Heptachlor	31	21	ug/kg
Heptachlor epoxide	ND	84	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: D1/2-20 (vertical composite)Date of Verification Survey: 8/23/02Time of Verification Survey: 1:55 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: Steve C. KornderDate: 9/3/02Print Name: Steve C. KornderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/4/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-20

GC Semivolatiles

Lot-Sample #....: F2H280172-005 Work Order #....: E7A8X1AA Matrix.....: SOLID
 Date Sampled....: 08/23/02 13:55 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 14:41
 Dilution Factor: 10
 % Moisture.....: 25 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	15 J	23	ug/kg
alpha-BHC	6.2 J, COL	23	ug/kg
gamma-BHC (Lindane)	ND	23	ug/kg
Chlordane (technical)	ND	230	ug/kg
4,4'-DDT	8.5 J, COL	23	ug/kg
Dieldrin	ND	23	ug/kg
Heptachlor	19 J, COL	23	ug/kg
Heptachlor epoxide	55 J, COL	89	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: 5 1/2 - 8Date of Verification Survey: 8/23/02Time of Verification Survey: 2:00 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/3/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/4/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/4/02Print Name: Veronica SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

TOTAL P.14

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J.5-8

GC Semivolatiles

Lot-Sample #....: F2H280172-006 Work Order #....: E7A811AA Matrix.....: SOLID
 Date Sampled....: 08/23/02 14:23 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 14:55
 Dilution Factor: 10
 % Moisture.....: 21 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	22	ug/kg
alpha-BHC	ND	22	ug/kg
gamma-BHC (Lindane)	ND	22	ug/kg
Chlordane (technical)	ND	220	ug/kg
4,4'-DDT	ND	22	ug/kg
Dieldrin	ND	22	ug/kg
Heptachlor	ND	22	ug/kg
Heptachlor epoxide	ND	85	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:09/3/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay
F-12	08/29/2002	8:45	base	0.006
F-14	08/29/2002	8:50	base	0.022
G-20	08/29/2002	8:50	base	0.012

Notes:

- 1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: E-12Date of Verification Survey: 8/29/02Time of Verification Survey: 8:45 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/9/02Print Name: Steve C. KomlerPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/17/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/17/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-12

GC Semivolatiles

Lot-Sample #....: F2H300266-001 Work Order #....: E7JFE1AA Matrix.....: SOLID
 Date Sampled....: 08/29/02 08:45 Date Received...: 08/30/02
 Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
 Prep Batch #....: 2246517 Analysis Time...: 10:11
 Dilution Factor: 1
 % Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	0.47 J, COL	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	0.43 J, COL	2.0	ug/kg
Dieldrin	1.1 J, COL	2.0	ug/kg
Heptachlor	3.5 COL	2.0	ug/kg
Heptachlor epoxide	ND	7.9	ug/kg
PERCENT		RECOVERY	
SURROGATE	RECOVERY	LIMITS	
Decachlorobiphenyl	81	(50 - 151)	
Tetrachloro-m-xylene	88	(64 - 131)	

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: P-14Date of Verification Survey: 8/29/02Time of Verification Survey: 8:50 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/9/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/17/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Veneeta SimonDate: 9/17/02Print Name: Veneeta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

GC Semivolatiles

Lot-Sample #....: F2H300266-002 Work Order #....: E7JFL1AA Matrix.....: SOLID
 Date Sampled....: 08/29/02 09:50 Date Received...: 08/30/02
 Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
 Prep Batch #....: 2246517 Analysis Time...: 10:51
 Dilution Factor: 1
 % Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	74	(50 - 151)
Tetrachloro-m-xylene	77	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: 6-20Date of Verification Survey: 8/29/02Time of Verification Survey: 8:50 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/9/02Print Name: Steve C. KomdarPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/17/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/17/02Print Name: Vereneta SimenPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: G-20

GC Semivolatiles

Lot-Sample #...: F2H300266-004 Work Order #...: E7JFQ1AA Matrix.....: SOLID
 Date Sampled...: 08/29/02 09:50 Date Received...: 08/30/02
 Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
 Prep Batch #...: 2246517 Analysis Time...: 11:18
 Dilution Factor: 1
 % Moisture.....: 7.3 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.2	ug/kg

SURROGATE	PERCENT	
	RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	76	(50 - 151)
Tetrachloro-m-xylene	81	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:09/4/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay
J-16½	08/29/2002	14:00	base	0.002
J-12	09/04/2002	8:25	base	0.002
J-14	09/04/2002	8:12	base	0.002
K-12	09/04/2002	8:15	vertical	0.001
K-14	09/04/2002	8:12	vertical	0.013

Notes:

- 1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.
The location designation for vertical samples indicates the actual sample location.
- 2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).
Sidewall - Vertical composite of five grab samples from excavation side wall.
- 3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: 5-16 1/2Date of Verification Survey: 8/29/02Time of Verification Survey: 2:00 am pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/13/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/11/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: [Signature]Date: 9/17/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-16 1/2

GC Semivolatiles

Lot-Sample #....: F2I050108-003 Work Order #....: E7PPW1AA Matrix.....: SOLID
Date Sampled....: 08/29/02 14:00 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 04:16
Dilution Factor: 1
% Moisture.....: 8.0 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	78	(50 - 151)
Tetrachloro-m-xylene	76	(64 - 131)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: J-12Date of Verification Survey: 9/4/02Time of Verification Survey: 8:25 (a) am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/13/02Print Name: Steve C. KomderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/17/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/17/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-12

GC Semivolatiles

Lot-Sample #....: F2I050108-001 Work Order #....: E7PPT1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:25 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 03:18
Dilution Factor: 1
% Moisture.....: 7.3 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.2	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	127	(50 - 151)
Tetrachloro-m-xylene	75	(64 - 131)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDEProject Name/Number: 341 East Ohio Street, Chicago, IllinoisArea Identification: J-14Date of Verification Survey: 9/4/02Time of Verification Survey: 8:12 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]Date: 9/13/02Print Name: Steve C. KorderPrint Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 9/17/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta SimonDate: 9/17/02Print Name: Verneta SimonPrint Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-14

GC Semivolatiles

Lot-Sample #....: F2I050108-002 Work Order #....: E7PPV1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:12 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 03:47
Dilution Factor: 1
% Moisture.....: 9.6 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	19	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.4	ug/kg
SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
Decachlorobiphenyl	107	(50 - 151)	
Tetrachloro-m-xylene	87	(64 - 131)	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-12

GC Semivolatiles

Lot-Sample #....: F2I050108-004 Work Order #....: E7PPX1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:15 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 06:13
Dilution Factor: 10
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	20	ug/kg
alpha-BHC	ND	20	ug/kg
gamma-BHC (Lindane)	ND	20	ug/kg
Chlordane (technical)	ND	200	ug/kg
4,4'-DDT	ND	20	ug/kg
Dieldrin	ND	20	ug/kg
Heptachlor	ND	20	ug/kg
Heptachlor epoxide	ND	77	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-14

GC Semivolatiles

Lot-Sample #....: F2I050108-005 Work Order #....: E7PP01AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:20 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 06:42
Dilution Factor: 10
% Moisture.....: 11 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	19	ug/kg
alpha-BHC	ND	19	ug/kg
gamma-BHC (Lindane)	ND	19	ug/kg
Chlordane (technical)	ND	190	ug/kg
4,4'-DDT	ND	19	ug/kg
Dieldrin	ND	19	ug/kg
Heptachlor	ND	19	ug/kg
Heptachlor epoxide	ND	75	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

Chlordane Immunoassay Field Results Summary

341 East Ohio Street

Date:10/16/2002

Sample Location ¹	Sample Date	Time	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)
K-12	09/04/2002	8:15	vertical	0.001
K-14	09/04/2002	8:12	vertical	0.013
H-6(3)	10/03/2002	10:20	base	ND-0.039 ^a

Notes:

1- Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.

The location designation for vertical samples indicates the actual sample location.

2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).

Sidewall - Vertical composite of five grab samples from excavation side wall.

3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

a - Three individual immunoassay tests were run on geoprobe samples collected prior excavation to determine vertical extent of the contaminants. Composite from same strata submitted for lab analysis following excavation.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDE

Project Name/Number: 341 East Ohio Street, Chicago, Illinois

Area Identification: K-12 (vertical composite)

Date of Verification Survey: 9/4/02

Time of Verification Survey: 8:15 (apvpm)

(revise lab report for heptachlor epoxide)
The above described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]

Date: 10/15/02

Print Name: Steve C. Kornder

Print Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 10/16/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Vernita Simon

Date: 10/14/02

Print Name: Vernita Simon

Print Title: On-Site Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-12

GC Semivolatiles

Lot-Sample #....: F2I050108-004 Work Order #....: E7PPX1AA Matrix.....: SOLID
 Date Sampled....: 09/04/02 08:15 Date Received...: 09/05/02
 Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
 Prep Batch #....: 2249219 Analysis Time...: 06:13
 Dilution Factor: 10
 % Moisture.....: 13 Method.....: SW846 8081A

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Aldrin	ND	20	ug/kg
alpha-BHC	ND	20	ug/kg
gamma-BHC (Lindane)	ND	20	ug/kg
Chlordane (technical)	ND	200	ug/kg
4,4'-DDT	ND	20	ug/kg
Dieldrin	ND	20	ug/kg
Heptachlor	ND	20	ug/kg
Heptachlor epoxide	ND	39	ug/kg
		PERCENT	RECOVERY
SURROGATE	RECOVERY	LIMITS	
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)	
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)	

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDE

Project Name/Number: 341 East Ohio Street, Chicago, Illinois

Area Identification: K-14 (Vertical excavation)

Date of Verification Survey: 9/4/02

Time of Verification Survey: 8:12 ^(am/pm)

(reviewed lab report for herbicide residue)
The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]

Date: 10/15/02

Print Name: Steve C. Komder

Print Title: Senior Project Geochemist

STS Consultants, Ltd.

The attached Verification Survey documents were reviewed by USEPA, Region 5 on 10/16/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 36 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Verneta Simon

Date: 10/16/02

Print Name: Verneta Simon

Print Title: On Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-14

GC Semivolatiles

Lot-Sample #....: F2I050108-005 Work Order #....: E7PP01AA Matrix.....: SOLID
 Date Sampled....: 09/04/02 08:20 Date Received...: 09/05/02
 Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
 Prep Batch #....: 2249219 Analysis Time...: 06:42
 Dilution Factor: 10
 % Moisture.....: 11 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	19	ug/kg
alpha-BHC	ND	19	ug/kg
gamma-BHC (Lindane)	ND	19	ug/kg
Chlordane (technical)	ND	190	ug/kg
4,4'-DDT	ND	19	ug/kg
Dieldrin	ND	19	ug/kg
Heptachlor	ND	19	ug/kg
Heptachlor epoxide	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

FORM FOR
NOTIFICATION OF SUCCESSFUL VERIFICATION SURVEY
PESTICIDE

Project Name/Number: 341 East Ohio Street, Chicago, Illinois

Area Identification: H-6 (Sample H6-3)

Date of Verification Survey: 10/3/02

Time of Verification Survey: 10:20 am/pm

The above-described excavation was sampled for pesticides at the time and date indicated above. The analytical results indicated that all pesticide-impacted soils have been removed as required by the Site Removal Action Criteria.

Documents pertaining to the pre-verification immunoassay and laboratory results for pesticides are attached for review and approval by the USEPA.

Signed: [Signature]

Date: 10/15/02

Print Name: Steve C. Korder

Print Title: Senior Project Geochemist

STS Consultants, Ltd.

The ~~attached~~ 10/16/02 Verification Survey documents were reviewed by USEPA, Region 5 on 10/16/02. The results of this survey indicate that the pesticide verification criteria as discussed in the Amended Removal Action Work Plan (STS, March 2002) and cleanup levels contained in 35 IAC 742 Appendix B, Table A for ingestion and inhalation, have been met.

Authorization is hereby granted to commence backfill and restoration work at this excavation.

Signed: Veeneta Simon

Date: 10/16/02

Print Name: Veeneta Simon

Print Title: On-Scene Coordinator

For USEPA Region 5

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H6-3

GC Semivolatiles

Lot-Sample #....: F2J040269-001 Work Order #....: E9FJW1AA Matrix.....: SOLID
 Date Sampled....: 10/03/02 10:20 Date Received...: 10/04/02
 Prep Date.....: 10/07/02 Analysis Date...: 10/10/02
 Prep Batch #....: 2280295 Analysis Time...: 22:05
 Dilution Factor: 1
 % Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	7.5	2.1	ug/kg
Heptachlor epoxide	ND	8.3	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	121	(52 - 130)
Tetrachloro-m-xylene	96	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

APPENDIX G

Soil Sample Analyses

- a. Radiological
 - i. NUTRANL
 - ii. RSSI Gamma Spectroscopy
- b. Pesticide
 - i. Field Immunoassay
 - ii. Severn Trent Laboratories

Radiological

Exclusion Zone



Nutranl Gamma Spec Report- 341 East Ohio Street Site

Exclusion Zone

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
36	6/7/02	zone exclusion	A 75-5 S1001	28.9	-49.45	12.59	146.36	3.62	18.88	4.19	165.24	5.537192429	54.62	159.83	7.138242081	-93.07254	33.43164
655	8/2/02	zone exclusion	A/2 75-3 5 WALL S1361	29.3	-0.99	3.92	4.58	1.14	1.28	1.46	5.86	1.852349859	11.19	0.87	0.932308962	-0.42966	3.66234
71	6/10/02	zone exclusion	B 5-5 75 S1034	17	1.08	7.96	53.98	2.23	24.35	2.74	78.33	3.532775113	14.72	0.67	1.080046295	-9.98448	4.092
88	6/11/02	zone exclusion	B 5-9 S1049	30.1	-0.63	1.96	4.57	0.58	3.53	0.73	8.1	0.93236259	10.49	3.98	0.95	3.29406	3.9897
555	7/19/02	zone exclusion	B 75-6 25 S1281	18.5	-30.07	9.07	105.67	2.56	11.97	2.93	117.64	3.890822535	18.67	20.29	1.979520144	3.9897	9.207
607	7/24/02	zone exclusion	B-2 25 S1327	23.6	6.72	6.28	12.32	1.75	2.81	2.15	15.13	2.772183255	14.31	0.43	1.210165278	-12.1737	4.56258
37	6/7/02	zone exclusion	B-4 5 S1002	28	-45.49	16.34	141.46	4.68	18.37	5.39	159.83	7.138242081	31.72	155.89	4.159062394	-50.76126	18.3117
903	9/30/02	zone exclusion	C 1-24 S1531	21.9	5.76	7.23	26.82	2.01	8.2	2.42	35.02	3.145870309	13.37	1.32	1.018331969	1.45266	4.17384
48	6/7/02	zone exclusion	C-2-3 5 S1013	19.8	-0.97	2.04	3.77	0.6	6.76	0.8	10.53	1	11.71	4.04	0.992018145	-5.44236	3.9897
155	6/18/02	zone exclusion	C 5-9 2 S1076	29.3	-256.07	49.27	600.79	13.99	33.29	15.72	634.08	21.04372826	571.97	1357.44	86.1239415	-1359.48516	384.17742
267	6/25/02	zone exclusion	C-16 S1133	30.6	0.13	3.92	14.92	1.13	5.96	1.4	20.88	1.799138683	11.07	6.78	1.056030303	3.90786	4.56258
191	6/19/02	zone exclusion	D 8-9 5 S1095	34.1	-1577.47	499.9	2140.03	145.03	1328.61	180.64	3468.64	231.6560176	15.78	0.65	1.470544117	-3.74418	5.54466
221	6/21/02	zone exclusion	D-10 S1106	19	-80.65	27.55	207.66	7.83	61.54	9.38	269.2	12.21856375	19.72	18.95	2.12708721	10.41414	9.5139
101	6/12/02	zone exclusion	D-5 5 S1060	32.7	-36.24	13.3	207.42	3.76	81.76	4.53	289.18	5.887147017	13.87	12.7	1.366528448	10.00494	6.09708
133	6/17/02	zone exclusion	D-6 5 S1071	37.3	3.6	2.88	2.27	0.82	1.81	1.08	4.08	1.356023599	10.53	3.18	0.984073168	8.22492	4.27614
157	6/18/02	zone exclusion	D-9 6 S1078	35	-12.07	7.21	17.99	2.1	37.61	2.86	55.6	3.564323218	10.06	5.2	0.892020179	1.04346	3.80556
156	6/18/02	zone exclusion	D-9 8 S1077	43	-664.46	187.77	945.81	54.63	411.63	66.58	1357.44	86.1239415	29.64	55.6	3.564323218	-24.69522	14.75166
222	6/21/02	zone exclusion	E 5-10 S1107	25.2	5.09	4.65	11.5	1.33	7.45	1.66	18.95	2.12708721	14.31	-0.49	1.112519663	-0.59334	4.7058
278	6/25/02	zone exclusion	E 5-10 5 S1134	27	12.29	9.09	21.53	2.52	30.12	3.37	51.65	4.208004278	18.57	5.68	1.846212339	12.54198	8.14308
279	6/25/02	zone exclusion	E 5-11 2 S1135	32.6	6.13	3.98	3.23	1.13	2.45	1.46	5.68	1.846212339	19.13	7.54	1.768162888	3.90786	7.63158
280	6/25/02	zone exclusion	E 5-11 5 S1136	29	1.91	3.73	4.15	1.08	3.39	1.4	7.54	1.768162888	17.32	23.16	2.004120755	7.22238	8.71596
631	7/30/02	zone exclusion	E 5-2 S1343	20.8	3.95	3.13	0.1	0.9	7.3	1.29	7.4	1.572927207	13.94	0.46	1.298499134	2.43474	5.17638
201	6/20/02	zone exclusion	E 5-3 5 S1098	16.5	-12.57	11.94	109.24	3.34	6.15	3.77	115.39	5.036715199	19.1	14.17	2.05	10.23	9.57528
199	6/20/02	zone exclusion	E 7-5 2 S1096	25.8	-6.93	5.45	18.68	1.58	7.39	1.97	26.07	2.525331661	25.8	22.69	2.71309786	-3.10992	12.84888
281	6/25/02	zone exclusion	E-11 S1137	34.5	3.53	4.26	11.77	1.22	11.39	1.59	23.16	2.004120755	15.24	-1.06	1.12200713	3.33498	4.78764
289	6/26/02	zone exclusion	E-12 S1138	34.7	7.14	5.28	13.72	1.49	7.83	1.83	21.55	2.359872878	19.03	3.95	1.582213639	10.80288	7.12008
302	6/27/02	zone exclusion	E-12 S1144	30.3	-2.45	5.99	20.73	1.72	20.1	2.23	40.83	2.81625638	24.61	44.4	2.660169168	-8.02032	11.51898
303	6/27/02	zone exclusion	E-12 S1145	27.8	-3.92	5.63	19.54	1.62	24.86	2.11	44.4	2.660169168	20	2.79	1.690266251	3.96924	7.24284
324	6/28/02	zone exclusion	E-7 S1154	31.7	0.48	3.08	2.01	0.91	4.23	1.24	6.24	1.538083223	19.71	2.91	1.554155719	-1.1253	6.73134
200	6/20/02	zone exclusion	F 5-3 5 S1097	18.9	-1.52	6.28	22.92	1.8	0.23	2.03	22.69	2.71309786	34.74	115.39	5.036715199	-25.71822	24.42924
353	7/1/02	zone exclusion	F 5-8 5 S1166	31.2	-9.04	8.78	54.08	2.48	11.42	2.89	65.5	3.808214805	38.38	94.28	4.853215429	-26.04558	23.46762
355	7/1/02	zone exclusion	F 5-9 S1168	29.3	-6.15	4.77	12.55	1.41	-0.99	1.62	11.56	2.147673159	13.55	-0.16	1.056834897	7.8771	4.46028
436	7/9/02	zone exclusion	F 5-9 S1211	22.5	-2.4	2.24	4.45	0.66	0.43	0.84	4.88	1.068269629	13.48	3.86	1.092016483	-0.22506	4.72626

Nutranl Gamma Spec Report- 341 East Ohio Street Site

Exclusion Zone

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
437	7/9/02	zone exclusion	F-5-9-5 S1212	23.3	-0.11	2.31	2.21	0.66	1.65	0.87	3.86	1.092016483	22.5	24.08	2.312055363	-7.5702	9.73896
389	7/2/02	zone exclusion	F-8-5-5 S1170	26	-262.29	61.32	507.12	17.47	70.86	20.1	577.98	26.63101387	27.64	55.68	3.553322389	2.046	17.04318
556	7/19/02	zone exclusion	F-14 S1282	42.2	1.95	4.5	18.28	1.28	2.01	1.51	20.29	1.979520144	17.13	0.69	1.830027322	-5.40144	7.161
202	6/20/02	zone exclusion	F-5-5 S1099	22.3	5	4.68	13.03	1.33	1.14	1.56	14.17	2.05	18.54	26.48	2.12868504	14.38338	9.63666
203	6/20/02	zone exclusion	F-6-2 S1100	29.8	7.03	4.71	15.8	1.32	10.68	1.67	26.48	2.12868504	15.82	0.61	1.358013255	-12.97164	4.99224
329	6/28/02	zone exclusion	F-7-5 S1159	29.1	-3.13	5.88	30.71	1.67	6.96	1.97	37.67	2.582595594	12.99	-0.16	0.998649088	5.44236	4.1943
354	7/1/02	zone exclusion	F-8-5 S1167	28.2	-12.73	11.47	85.65	3.21	8.63	3.64	94.28	4.853215429	22.69	11.56	2.147673159	-12.5829	9.75942
439	7/9/02	zone exclusion	G-3-3 S1214	27.4	-1226.87	256.81	1264.85	76.37	133.44	87.27	1398.29	115.9673652	21.89	23.85	2.644125564	-1.41174	11.84634
854	9/18/02	zone exclusion	G-5/21-5 S1496	31	-0.96	5.14	9.4	1.47	1.79	1.81	11.19	2.33173755	18.88	11.77	1.704142013	5.36052	7.52928
855	9/18/02	zone exclusion	G-5/22 S1497	30.5	2.62	3.68	6.03	1.04	5.74	1.35	11.77	1.704142013	12.42	1.14	0.97200823	-0.49104	4.092
899	9/26/02	zone exclusion	G-5/24-2 S1529	31.4	1.26	5.65	20.33	1.62	8.19	1.94	28.52	2.527449307	15.94	8.42	1.432236014	1.45266	6.2403
536	7/17/02	zone exclusion	G-5-11 S1266	33.9	-2.16	4.59	20.59	1.31	2.92	1.6	23.51	2.067873304	24.86	21.45	2.491605908	-4.17384	11.37576
551	7/18/02	zone exclusion	G-5-12 S1279	31.5	-2.05	3.18	4.44	0.94	0.46	1.16	4.9	1.493050568	24.82	45.13	3.234439673	8.22492	15.40638
438	7/9/02	zone exclusion	G-5-2 S1213	21	-3.7	4.76	11.89	1.4	12.19	1.84	24.08	2.312055363	753.29	1398.29	115.9673652	-2510.17602	525.43326
709	8/13/02	zone exclusion	G-5-20-5 S1401	28.9	-326.31	83.37	769.74	23.66	217.97	28.09	987.71	36.72660752	10.21	-0.02	0.810246876	-0.85932	3.21222
440	7/9/02	zone exclusion	G-5-3 S1215	19.5	-0.69	5.79	17.01	1.67	6.84	2.05	23.85	2.644125564	11.11	-0.26	0.870057469	-0.53196	3.64188
460	7/10/02	zone exclusion	G-5-5-5 S1218	30.9	-0.42	4.08	4.12	1.2	2.88	1.56	7	1.968146336	15.4	23.56	1.666433317	6.83364	7.34514
793	9/4/02	zone QC	S1455	31.8	-12.86	12.16	193.12	3.39	48.94	4.01	242.06	5.250923728	20.08	40.25	2.566320323	-9.26838	12.13278
900	9/26/02	zone exclusion	G-75/23-75 S1530	24	0.71	3.05	4.5	0.88	3.92	1.13	8.42	1.432236014	11.13	-0.02	0.860232527	2.10738	3.56004
461	7/10/02	zone exclusion	G-8-5-5 S1219	31.2	3.34	3.59	13.01	1.03	10.55	1.31	23.56	1.666433317	13.04	-0.85	1.086001842	6.19938	4.7058
537	7/17/02	zone exclusion	G-11 S1267	34	-2.04	5.56	18.16	1.6	3.29	1.91	21.45	2.491605908	772.29	1435.89	116.9259903	-2341.38102	535.35636
371	7/2/02	zone exclusion	G-2 S1172	22.9	-171.86	31.33	365.21	8.93	39.54	10.2	404.75	13.55672896	15.43	0.66	1.284562182	-3.069	4.95132
370	7/2/02	zone exclusion	G-2-5 S1171	28.4	1	8.33	46.29	2.31	9.39	2.7	55.68	3.553322389	94.54	404.75	13.55672896	-351.62556	64.10118
459	7/10/02	zone exclusion	G-7 S1217	29	-3.7	2.05	7.07	0.61	3.03	0.76	10.1	0.990202	20.01	7	1.968146336	-0.85932	8.34768
388	7/8/02	zone exclusion	G-8 S1180	42.6	-24.54	20.14	96.32	5.79	155.69	7.8	252.01	9.714118591	39.8	165.4	5.039781741	-21.60576	22.6083
550	7/18/02	zone exclusion	H-5-11 S1278	33	4.82	3.34	4.84	0.92	1.36	1.19	6.2	1.504160896	17.83	4.9	1.493050568	-4.1943	6.50628
516	7/12/02	zone exclusion	H-5-3 S1255	24.8	-179.85	38.48	406.97	10.92	50.02	12.48	456.99	16.58302747	16.54	1.26	1.398463442	-6.15846	5.23776
515	7/12/02	zone exclusion	H-5-4 S1254	27.1	-4.66	7.18	20.55	2.11	13.23	2.64	33.78	3.379600568	111.6	456.99	16.58302747	-367.9731	78.73008
525	7/16/02	zone exclusion	H-5-8-5 S1258	21	-3.39	4.18	3.55	1.26	3.55	1.66	7.1	2.084034549	15.27	4.98	1.342013413	-5.07408	5.44236
521	7/15/02	zone exclusion	H-8-3 S1256	30.7	4.35	3.84	11.85	1.09	3.71	1.34	15.56	1.727338994	23.91	12.85	2.416153969	11.80542	11.1507
522	7/15/02	zone exclusion	H-8-4 S1257	33.7	5.77	5.45	9.94	1.53	2.91	1.87	12.85	2.416153969	13.39	-0.04	1.060188662	3.76464	4.48074
708	8/13/02	zone exclusion	H-20-25 S1400	29.4	-26.32	14.81	147.94	4.19	30.32	4.88	178.26	6.431990361	245.98	987.71	36.72660752	-667.63026	170.57502
545	7/18/02	zone exclusion	H-11 S1273	30.1	-0.68	2.38	9.1	0.69	2.31	0.86	11.41	1.102587865	21.76	4.32	1.862068742	1.37082	7.95894

Nutranl Gamma Spec Report- 341 East Ohio Street Site
Exclusion Zone

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group exclusion	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
634	7/31/02	zone exclusion	H-18 5 S1344	37.3	11.23	11.2	36.82	3.1	0.75	3.42	37.57	4.615885614	17.53	1.45	1.410141837	-8.98194	5.64696
512	7/12/02	zone exclusion	H-3 S1251	20.7	17.89	11.16	115.42	3.15	70.21	3.92	185.63	5.028807016	63.37	205.38	9.339486067	-192.28308	43.92762
514	7/12/02	zone exclusion	H-3 5 S1253	21.2	44.82	14.58	128.81	4.13	8.63	4.68	137.44	6.24173854	27.04	33.78	3.379600568	-9.53436	14.69028
513	7/12/02	zone exclusion	H-4 S1252	23.6	93.98	21.47	187.35	6.16	18.03	7.02	205.38	9.339486067	43.87	137.44	6.24173854	-91.70172	29.63068
443	7/10/02	zone exclusion	H-5 S1216	34.8	7.44	4.45	10.52	1.34	5.22	1.7	15.74	2.164624679	13.67	3.87	1.228006515	0.77748	5.115
474	7/11/02	zone exclusion	H-8 S1220	35.8	4.92	3.6	5.49	1.01	3.92	1.32	9.41	1.662077014	15.23	3.46	1.256025477	-0.7161	5.27868
635	7/31/02	zone exclusion	H-9 S1345	38.5	4.39	2.76	0.91	0.83	0.54	1.14	1.45	1.410141837	12.36	2.09	0.990202	8.20446	4.46028
726	8/16/02	zone exclusion	I-5-10 25 S1412	31.4	14.51	10.36	44.17	2.82	4.53	3.25	48.7	4.302894375	3679.89	4206.71	562.3376537	-9871.97046	2487.1176
530	7/16/02	zone exclusion	I-5-9 5 S1262	34.5	-2	3.15	6.01	0.91	1.24	1.15	7.25	1.466492414	4863.07	4598.69	745.9769941	-12146.9997	3155.01384
736	8/20/02	zone exclusion	I-75/19 5 S1418	33.7	555.13	129.87	1944.61	36.45	205.44	41.55	2150.05	55.27209965	243.93	2084.9	37.90082453	-1256.50998	181.64388
727	8/16/02	zone exclusion	I-75-10 5 S1413	39.3	4825.01	1215.6	3752.32	369.48	454.39	423.92	4206.71	562.3376537	24.28	33	2.911099449	14.19924	13.1967
532	7/16/02	zone exclusion	I-10 S1264	29.3	3.15	3.16	1.54	0.93	8.92	1.33	10.46	1.622898641	12.29	-0.26	0.97416631	4.56258	4.1943
535	7/17/02	zone exclusion	I-10 5 S1265	32.2	7.11	4.42	5.64	1.23	3.25	1.58	8.89	2.00232365	15.6	23.51	2.067873304	-4.41936	9.39114
552	7/18/02	zone exclusion	I-10 5 S1280	30	4.02	7.53	39.72	2.1	5.41	2.46	45.13	3.234439673	13.6	-0.54	1.056030303	-3.9897	4.3989
538	7/17/02	zone exclusion	I-11 S1268	34.7	1144.37	261.66	1304.63	77.06	131.26	87.94	1435.89	116.9259903	13.89	4.25	1.156027681	-2.16876	4.86948
526	7/16/02	zone exclusion	I-7 5 S1259	22.5	-2.48	2.66	1.7	0.81	3.28	1.07	4.98	1.342013413	8.8	6.21	0.784091831	0.85932	3.3759
527	7/16/02	zone exclusion	I-9 S1260	18.5	0.42	1.65	3.17	0.48	3.04	0.62	6.21	0.784091831	20.21	6.83	1.804134141	7.83618	7.9794
528	7/16/02	zone exclusion	I-9 5 S1261	30	3.83	3.9	4.25	1.1	2.58	1.43	6.83	1.804134141	17.87	8.26	1.82428068	6.15846	7.81572
531	7/16/02	zone exclusion	I-9 5 S1263	48.8	5936.95	1542.04	3809.19	482.01	789.5	569.34	4598.69	745.9769941	17.49	10.46	1.622898641	-6.4449	6.46536
735	8/20/02	zone exclusion	J 5/19 S1417	33.1	176.16	62.44	630.26	17.58	90.45	20.17	720.71	26.75603296	365.46	2150.05	55.27209965	-1135.79598	265.71402
738	8/20/02	zone exclusion	J 5/19 5 S1420	30.1	6634.68	1397.23	6867.1	415.56	3249.45	514.88	10116.55	661.6581655	10.83	-0.12	0.866083137	-2.31198	3.49866
757	8/26/02	zone exclusion	J 75/10 9 S1431	33.1	816.17	151.44	1683.82	43.04	91.03	45.24	1774.85	64.64935576	11.47	3.32	1.020049018	6.138	4.37844
737	8/20/02	zone exclusion	J 75/18 5 S1419	29.6	614.13	88.78	1889.85	25.03	195.05	28.46	2084.9	37.90082453	4510.86	10116.55	661.6581655	-13574.55528	2858.73258
728	8/16/02	zone exclusion	J-11 S1414	26.6	6.94	6.45	20.51	1.81	12.49	2.28	37	2.911099449	13.37	-0.19	1.170683561	5.19684	4.88994
719	8/16/02	zone exclusion	J-9 5 S1405	24.1	9.28	4.69	25.31	1.37	8.43	1.65	33.74	2.144621179	18.44	1.56	1.45	9.37068	5.74926
792	9/4/02	zone QC exclusion	K-18 5 S1454	28.1	3555.51	745.92	5421.13	216.24	1988.23	261.86	7409.36	339.6032939	35.83	242.06	5.250923728	-26.31156	24.67936
790	9/4/02	zone QC exclusion	L 25-6 S1452	26.3	40.75	16.41	193.04	4.6	17.29	5.2	210.33	6.942621983	49.67	240.55	7.303019923	-129.1026	35.25258
791	9/4/02	zone QC exclusion	L 25-6 25 S1453	27.2	63.1	17.23	224.47	4.85	16.08	5.46	240.55	7.303019923	2275.67	7409.36	339.6032939	-7274.57346	1526.15262
794	9/4/02	zone QC exclusion	L 5/5 75-6 5 S1456	29.9	4.53	5.93	37.42	1.68	2.83	1.94	40.25	2.566320323	11.51	-0.35	0.958018789	3.2736	4.17384
847	9/13/02	zone exclusion	L-19 S1495	31.7	3.46	8.09	59.58	2.27	9.79	2.63	69.37	3.474161769	16.21	-0.15	1.380036231	4.092	5.48328
810	9/5/02	zone exclusion	M-8 1 S1470	27.6	1.32	2.9	5.14	0.86	2.17	1.09	7.31	1.388416364	15.24	5.9	1.456021978	0.87978	6.26076
828	9/11/02	zone exclusion	N 2-10 2 North Wall S1480	26.4	4.92	2.38	1.19	0.67	1.29	0.89	2.48	1.114001795	12.68	0.96	1.05	5.66742	4.46028
842	9/11/02	zone exclusion	N-10 North Wall S1494	25.9	91.15	21.6	225.01	6.14	15.85	6.95	240.66	9.273731719	12.37	-0.67	0.693084542	6.3426	3.76464

Pre-EPA



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Pre-EPA

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty				
653	8/2/02	Pre EPA	A-5/2-5 S1359	21.7	3.55	2.22	1.35	0.63	3.06	0.86	4.41	1.06606754	15.17	0.77	1.248519123	12.05094	5.38098
658	8/5/02	Pre EPA	A-10/5 S1362	26	0.53	2.36	2.1	0.7	2.75	0.92	4.85	1.156027681	11.77	8.17	1.130707743	-7.48436	4.8081
659	8/5/02	Pre EPA	A-12/25 S1363	31.3	-3.66	2.35	6.07	0.71	2.1	0.88	8.17	1.130707743	15.65	0.31	1.398463442	0.65472	5.7288
663	8/6/02	Pre EPA	A-12/25 S1365	34	-1.72	3.35	6.06	0.98	1.01	1.22	7.07	1.564864211	15.33	-0.19	1.14621115	-7.91802	4.35798
74	6/11/02	Pre EPA	B-4/5 Pre-EPA #1	22.8	3.13	3.34	1.98	0.96	1.53	1.23	3.51	1.560288435	15.94	6.02	1.370036496	-14.75166	5.46282
75	6/11/02	Pre EPA	B-4/5 Pre-EPA #2	24.6	-7.21	2.67	2.95	0.83	3.07	1.09	6.02	1.370036496	19.13	5.15	1.652059321	9.45252	7.07916
76	6/11/02	Pre EPA	B-4/5 Pre-EPA #3	21.8	4.62	3.46	1.42	0.98	3.73	1.33	5.15	1.652059321	15.37	3.8	1.254192968	-1.75956	5.3196
77	6/11/02	Pre EPA	B-4/5 Pre-EPA #4	26.8	-0.86	2.6	2.56	0.77	1.24	0.99	3.8	1.254192968	10.43	6.92	0.956033472	4.1943	4.13292
348	7/1/02	Pre EPA	B-C/13-17.5	29.9	-1.62	1.84	0.31	0.54	1.2	0.76	1.51	0.932308962	13.27	3.86	1.172006826	-5.13546	4.76718
216	6/21/02	Pre EPA	B-C/6-9	24.4	0.6	2.24	1.8	0.66	1.07	0.88	2.87	1.1	9.76	2.38	0.794040301	2.51658	3.35544
347	7/1/02	Pre EPA	B-C/9-13	25.5	2.88	2.16	-0.35	0.61	3.46	0.86	3.11	1.054371851	11.53	1.51	0.932308962	-3.31452	3.76464
149	6/17/02	Pre EPA	B-D/2-6 Pre EPA#1	33.2	1.64	2.61	1.76	0.75	2.57	1	4.33	1.25	12.55	6.91	1.152562363	1.4322	5.115
150	6/17/02	Pre EPA	B-D/2-6 Pre EPA#2	35	0.7	2.5	5.64	0.72	1.27	0.9	6.91	1.152562363	17.59	5.09	1.742010333	9.0024	7.5702
151	6/17/02	Pre EPA	B-D/2-6 Pre EPA#3	33	4.4	3.7	2.23	1.05	2.86	1.39	5.09	1.742010333	11.77	6.64	1.06212052	2.41428	4.54212
152	6/17/02	Pre EPA	B-D/2-6 Pre EPA#4	34.1	1.18	2.22	3.37	0.65	3.27	0.84	6.64	1.06212052	12.7	-0.42	0.968349111	-0.75702	4.07154
352	7/1/02	Pre EPA	C-D/13-17.5	28.2	5.99	2.84	2.21	0.8	0.95	1.03	3.16	1.30418557	29.95	65.5	3.808214805	-18.49584	17.96388
219	6/21/02	Pre EPA	C-D/2-6	25.3	1.25	1.45	0.87	0.42	3.06	0.58	3.93	0.716100552	10.26	2.08	0.814002457	-2.06646	3.4782
220	6/21/02	Pre EPA	C-D/6-9	25.4	-1.01	1.7	1.55	0.49	0.53	0.65	2.08	0.814002457	89.95	269.2	12.21856375	-165.0099	56.3673
349	7/1/02	Pre EPA	C-D/9-13	28.4	-2.51	2.33	1.86	0.7	2	0.94	3.86	1.172006826	11.4	3.09	0.9	1.20714	3.84648
350	7/1/02	Pre EPA	D-E/13-17.5	28.9	0.59	1.88	1.1	0.54	1.99	0.72	3.09	0.9	11.99	1.6	0.998098192	0.36628	4.2966
218	6/21/02	Pre EPA	D-E/2-6	21.5	1.67	2.42	2.02	0.7	1.2	0.92	3.22	1.156027681	7.87	3.93	0.716100552	2.5575	2.9667
217	6/21/02	Pre EPA	D-E/6-9	23.8	1.23	1.64	0.33	0.47	2.05	0.64	2.38	0.794040301	13.17	3.22	1.156027681	3.41682	4.95132
351	7/1/02	Pre EPA	D-E/9-13	31.4	0.18	2.1	1.35	0.61	0.25	0.79	1.6	0.998098192	14.32	3.16	1.30418557	12.25554	5.81064
654	8/2/02	Pre EPA	E-5/2 S1360	36.3	5.89	2.63	0.79	0.72	1.56	1.02	0.77	1.248519123	18.15	5.86	1.852349859	-2.02554	8.02032
484	7/11/02	Pre EPA	E-F/10-11 Pre EPA S1230	28.7	1.48	3.2	1.07	0.94	3.21	1.32	4.28	1.620493752	14.4	0.31	1.131591799	7.161	4.62396
662	8/6/02	Pre EPA	E-F/11-2.25 S1364	34.3	0.39	2.32	0.8	0.66	-0.09	0.88	0.71	1.1	17.43	7.07	1.564864211	-3.51912	6.8541
559	7/22/02	Pre EPA	E-G/10-12 S1283	37.5	1.54	1.83	0.89	0.53	1.46	0.72	2.35	0.894035793	13.78	2.6	1.160172401	-7.6725	4.46028
480	7/11/02	Pre EPA	E-G/2-4 Pre EPA S1226	27.2	-0.23	2.65	2.02	0.79	3.4	1.07	5.42	1.330037593	12.65	4.08	1.052093152	-8.02032	4.23522
481	7/11/02	Pre EPA	E-G/4-6 Pre EPA S1227	25.6	-3.92	2.07	1.03	0.62	3.05	0.85	4.08	1.052093152	16.38	2.11	1.370036496	2.72118	5.85156
482	7/11/02	Pre EPA	E-G/6-8 Pre EPA S1228	27.4	1.33	2.86	2.1	0.83	0.01	1.09	2.11	1.370036496	13.69	2.81	1.164001718	-1.1253	4.8081
483	7/11/02	Pre EPA	E-G/8-10 Pre EPA S1229	28.9	-0.55	2.35	1.02	0.7	1.79	0.93	2.81	1.164001718	15.35	4.28	1.620493752	3.02808	6.5472
539	7/17/02	Pre-EPA	G-I 5/2-4 S1269	31.2	-1.06	2.38	1.77	0.7	2.48	0.92	4.25	1.156027681	14.71	5.68	1.298075499	1.3299	5.54466
540	7/17/02	Pre-EPA	G-I 5/4-6 S1270	31.2	0.65	2.71	3.62	0.79	2.06	1.03	5.68	1.298075499	14.61	3.68	1.138112472	-1.26652	4.64442
541	7/17/02	Pre-EPA	G-I 5/6-8 S1271	35.5	-0.62	2.27	0.29	0.67	3.39	0.92	3.68	1.138112472	16.76	3.03	1.338095662	-6.91548	5.46282
542	7/17/02	Pre-EPA	G-I 5/8-9 S1272	35.2	-3.38	2.67	1.35	0.79	1.68	1.08	3.03	1.338095662	15.44	0.64	1.218277472	-2.6598	4.82856

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Complete File of Nutranl Samples																	
Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty				
561	7/22/02	Pre EPA	G-I/11-13 S1285	32.6	1.96	1.97	0.72	0.57	2.48	0.77	3.2	0.958018789	10.2	2.33	0.822009732	-3.53958	3.33498
560	7/22/02	Pre EPA	G-I/9-11 S1284	27.1	-3.75	2.18	0.69	0.68	1.91	0.94	2.6	1.160172401	11.32	3.2	0.958018789	4.01016	4.03062
636	7/31/02	Pre EPA	H-18.5 #1 S1346	30.8	4.01	2.18	1.96	0.61	0.13	0.78	2.09	0.990202	23.06	5.24	2.018167486	6.30168	8.65458
637	7/31/02	Pre EPA	H-18.5 #2 S1347	31.8	3.08	4.23	1.9	1.19	3.34	1.63	5.24	2.018167486	13.73	-0.28	1.16211015	-6.15846	4.6035
649	8/1/02	Pre EPA	H-I/8-9 S1357	37.7	4.17	2.07	1.14	0.59	1.43	0.78	2.57	0.97800818	9.52	1.78	0.778010283	-0.85932	3.2736
650	8/1/02	Pre EPA	H-I/9-10 S1358	35.5	-0.42	1.6	1.21	0.47	0.57	0.62	1.78	0.778010283	19.28	-0.68	1.448067678	-1.04346	5.99478
758	8/26/02	Pre EPA	I-5-J 5/10 5-11.5 S1432	33.1	3	2.14	1.7	0.62	1.62	0.81	3.32	1.020049018	13.18	1.23	1.096220781	-1.57542	4.43982
759	8/26/02	Pre EPA	I-5-J 5/9 5-10.5 S1433	35	-0.77	2.17	-0.49	0.64	1.72	0.89	1.23	1.096220781	13.12	1.83	1.010198	-2.70072	4.05108
734	8/20/02	Pre EPA	I-5-K/10 5-12 S1416	30.4	-0.13	2.05	1.67	0.6	0.21	0.78	1.88	0.984073168	175.06	720.71	26.75603296	-360.42336	127.75224
733	8/20/02	Pre EPA	I-5-K/9-10 S1415	33.6	1.1	2.13	1.27	0.62	-0.16	0.8	1.11	1.012126474	11.54	1.88	0.984073168	-0.26598	4.1943
856	9/18/02	Pre EPA	I-L/17 5-19 #1 S1498	32.1	-0.24	2	0.53	0.58	0.61	0.78	1.14	0.97200823	13.51	1.51	1.130044247	-1.20714	4.76718
857	9/18/02	Pre EPA	I-L/17 5-19 #2 S1499	32.9	0.59	2.33	0.46	0.67	1.05	0.91	1.51	1.130044247	14.75	-0.01	1.062544117	5.87202	4.52166
811	9/5/02	Pre EPA	L 5/5.75-6.5 S1471	31	0.43	3.06	3.5	0.88	2.4	1.16	5.9	1.456021978	15.49	1.78	1.410141837	-6.28122	5.4219
826	9/11/02	Pre EPA	M-N 7-8.5 S1478	33.5	-1.23	1.88	0.78	0.55	1.31	0.74	2.09	0.922008677	9.62	2.4	0.818413099	8.40906	3.41682
827	9/11/02	Pre EPA	M-N 8.5-10.5 S1479	32.1	4.11	1.67	-0.7	0.47	3.1	0.67	2.4	0.818413099	12.9	2.48	1.114001795	10.06632	4.86948

EPA



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Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty			
98	6/11/02	EPA	A-B/2-6 EPA #5 S1059	25.3	2.73	2.53	1.74	0.74	2.75	0.96	4.49	1.212105606	17.73	-0.17	1.434503398	4.6035 5.9334
399	7/8/02	EPA	A.5-D.5/14-15.5 EPA#1	29.8	-3.08	1.88	0.92	0.58	1.82	0.79	2.74	0.980051019	10.92	2.41	1.014001972	2.88486 4.25568
400	7/8/02	EPA	A.5-D.5/14-15.5 EPA#2	30.1	1.41	2.08	1.6	0.61	0.81	0.81	2.41	1.014001972	10.2	3.05	0.854458893	2.98716 3.49866
401	7/8/02	EPA	A.5-D.5/14-15.5 EPA#3	30.5	1.46	1.71	-0.44	0.49	3.49	0.7	3.05	0.854458893	12.78	2.58	0.994032193	-0.77748 4.15338
402	7/8/02	EPA	A.5-D.5/14-15.5 EPA#4	31	-0.38	2.03	0.34	0.59	2.24	0.8	2.58	0.994032193	9.06	2.74	0.75	-3.35544 3.02808
403	7/8/02	EPA	A.5-D.5/14-15.5 EPA#5	29.4	-1.64	1.48	1.34	0.45	1.4	0.6	2.74	0.75	15.72	3.4	1.280039062	2.2506 5.38098
394	7/8/02	EPA	A.5-D/15.5-17.5 EPA#1	26.5	-0.18	2.65	1.6	0.78	2.39	1.06	3.99	1.31605471	11.02	4.2	0.928008621	1.8414 3.84648
395	7/8/02	EPA	A.5-D/15.5-17.5 EPA#2	27.9	0.9	1.88	1.86	0.56	2.34	0.74	4.2	0.928008621	13.1	4.77	1.142015762	11.94864 5.09454
396	7/8/02	EPA	A.5-D/15.5-17.5 EPA#3	28.1	5.84	2.49	2.46	0.69	2.31	0.91	4.77	1.142015762	14.16	4	1.214001647	9.5139 5.3196
397	7/8/02	EPA	A.5-D/15.5-17.5 EPA#4	26.5	4.65	2.6	1.51	0.73	2.49	0.97	4	1.214001647	9.06	4.99	0.814002457	2.37336 3.39636
398	7/8/02	EPA	A.5-D/15.5-17.5 EPA#5	26.3	1.16	1.66	1.8	0.49	3.19	0.65	4.99	0.814002457	11.86	2.74	0.980051019	-6.30168 3.84648
409	7/8/02	EPA	A.5-E/13-14 EPA#1	31.6	1.51	1.78	0.26	0.51	1.16	0.69	1.42	0.858020979	11.87	2.8	0.986002028	2.29152 4.13292
410	7/8/02	EPA	A.5-E/13-14 EPA#2	32.2	1.12	2.02	0.65	0.59	2.15	0.79	2.8	0.986002028	10.61	2.12	0.864002315	0.3069 3.60096
411	7/8/02	EPA	A.5-E/13-14 EPA#3	31.7	0.15	1.76	1.03	0.52	1.09	0.69	2.12	0.864002315	10.99	2.34	0.888144132	4.03062 3.76464
412	7/8/02	EPA	A.5-E/13-14 EPA#4	30.7	1.97	1.84	0.29	0.52	2.05	0.72	2.34	0.888144132	11.82	1.54	0.962133047	2.00508 4.13292
413	7/8/02	EPA	A.5-E/13-14 EPA#5	31.7	0.98	2.02	1.32	0.59	0.22	0.76	1.54	0.962133047	9.72	5.68	0.892020179	8.7978 3.84648
666	8/7/02	EPA	A-A.5/2.5-3.5 EPA #1	27.2	-1.14	1.73	1.12	0.51	1.49	0.68	2.61	0.85	14.8	10.19	1.424359505	0.08184 6.30168
667	8/7/02	EPA	A-A.5/2.5-3.5 EPA #2	26.6	0.04	3.08	7.74	0.88	2.45	1.12	10.19	1.424359505	12.64	3.63	1.070046728	4.37844 4.54212
668	8/7/02	EPA	A-A.5/2.5-3.5 EPA #3	25.4	2.14	2.22	1.61	0.65	2.02	0.85	3.63	1.070046728	14.18	3.2	1.186001686	-4.62396 4.86948
669	8/7/02	EPA	A-A.5/2.5-3.5 EPA #4	25.8	-2.26	2.38	1.22	0.71	1.98	0.95	3.2	1.186001686	13.54	3.79	1.126143863	-2.9667 4.72626
670	8/7/02	EPA	A-A.5/2.5-3.5 EPA #5	25.4	-1.45	2.31	2.17	0.69	1.62	0.89	3.79	1.126143863	10.68	0.9	0.836002392	-7.01778 3.31452
94	6/11/02	EPA	A-B/2-6 EPA #1 S1055	25.8	1.58	1.88	2.24	0.56	3.25	0.73	5.49	0.920054346	11.99	4.97	1.008017857	4.31706 4.33752
95	6/11/02	EPA	A-B/2-6 EPA #2 S1056	26.9	2.11	2.12	1.8	0.6	3.17	0.81	4.97	1.008017857	10.68	6.13	1.086001842	5.17638 4.66488
96	6/11/02	EPA	A-B/2-6 EPA #3 S1057	28.3	2.53	2.28	3.44	0.65	2.69	0.87	6.13	1.086001842	12.17	5.37	1.056030303	-1.61634 4.33752
97	6/11/02	EPA	A-B/2-6 EPA #4 S1058	27.1	-0.79	2.12	2.11	0.64	3.26	0.84	5.37	1.056030303	13.95	4.49	1.212105606	5.58558 5.17638
920	10/1/02	EPA	B.5-D/23.5-25 EPA#1 S1546	31.9	0.08	1.59	0.07	0.47	0.12	0.63	0.19	0.78816242	10.03	1.28	0.78816242	6.4449 3.39636
921	10/1/02	EPA	B.5-D/23.5-25 EPA#2 S1547	33.6	3.15	1.66	-0.15	0.46	1.43	0.64	1.28	0.78816242	9.4	0.71	0.720069441	-0.1023 3.08946

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922	10/1/02	EPA	B.5-D/23.5-25 EPA#3 S1548	33.9	-0.05	1.51	1.05	0.44	-0.34	0.57	0.71	0.720069441	9.22	1.98	0.818413099	6.6495	3.41682
923	10/1/02	EPA	B.5-D/23.5-25 EPA#4 S1549	32.3	3.25	1.67	0.3	0.47	1.68	0.67	1.98	0.818413099	11.17	1.86	0.922008677	-0.18414	3.76464
924	10/1/02	EPA	B.5-D/23.5-25 EPA#5 S1550	32.6	-0.09	1.84	0.4	0.55	1.46	0.74	1.86	0.922008677	15.81	1.43	1.214907404	-1.55496	4.78764
89	6/11/02	EPA	B-8.5 EPA #1 S1050	36.5	1.61	1.95	2.12	0.57	1.86	0.76	3.98	0.95	11.25	7.42	1.026157883	6.05616	4.5012
90	6/11/02	EPA	B-8.5 EPA #2 S1051	34.1	2.96	2.2	4.44	0.63	2.98	0.81	7.42	1.026157883	12.81	3.57	1.108016245	3.60096	4.7058
91	6/11/02	EPA	B-8.5 EPA #3 S1052	34.4	1.76	2.3	1.14	0.66	2.43	0.89	3.57	1.108016245	11.33	4.01	0.994032193	6.83364	4.23522
92	6/11/02	EPA	B-8.5 EPA #4 S1053	35.2	3.34	2.07	1.58	0.59	2.43	0.8	4.01	0.994032193	14.51	3.01	1.184060809	10.9461	5.3196
93	6/11/02	EPA	B-8.5 EPA #5 S1054	35.7	5.35	2.6	1.33	0.72	1.68	0.94	3.01	1.184060809	9.79	5.49	0.920054346	3.23268	3.84648
158	6/18/02	EPA	B-C/2-6 EPA #1 S1079	27.7	0.51	1.86	2.79	0.54	2.41	0.71	5.2	0.892020179	14.43	4.53	1.280039062	11.19162	5.48328
159	6/18/02	EPA	B-C/2-6 EPA #2 S1080	26.8	5.47	2.68	1.42	0.76	3.11	1.03	4.53	1.280039062	12.24	5.27	1.084066419	8.92056	4.68534
160	6/18/02	EPA	B-C/2-6 EPA #3 S1081	28.5	4.36	2.29	2.58	0.66	2.69	0.86	5.27	1.084066419	10.22	4.7	0.85	13.03302	3.74418
161	6/18/02	EPA	B-C/2-6 EPA #4 S1082	27.5	6.37	1.83	1.57	0.51	3.13	0.68	4.7	0.85	13.34	5.99	1.208014901	11.84634	5.23776
162	6/18/02	EPA	B-C/2-6 EPA #5 S1083	27.6	5.79	2.56	1.83	0.72	4.16	0.97	5.99	1.208014901	14.54	21.29	1.663309953	4.41936	7.5702
257	6/25/02	EPA	B-C/6-9 EPA#1 S1123	31.3	-3.14	2.14	1.71	0.64	1.88	0.84	3.59	1.056030303	12.72	3.59	1.056030303	-6.42444	4.37844
258	6/25/02	EPA	B-C/6-9 EPA#2 S1124	31.8	1.65	2.09	1.75	0.6	2.08	0.79	3.83	0.992018145	11.46	3.83	0.992018145	3.3759	4.27614
259	6/25/02	EPA	B-C/6-9 EPA#3 S1125	32.7	2.84	1.67	-0.09	0.47	3.41	0.66	3.32	0.810246876	10.05	3.32	0.810246876	5.81064	3.41682
260	6/25/02	EPA	B-C/6-9 EPA#4 S1126	32.9	0.13	1.92	1.16	0.55	0.4	0.71	1.56	0.898109125	11.7	1.56	0.898109125	0.26598	3.92832
261	6/25/02	EPA	B-C/6-9 EPA#5 S1127	32.7	-1.97	2.1	2.27	0.61	1	0.79	3.27	0.998098192	12.43	3.27	0.998098192	-4.03062	4.2966
404	7/8/02	EPA	B-C/9-13 EPA#1	31.6	1.1	2.63	0.59	0.76	2.81	1.03	3.4	1.280039062	7.04	3.49	0.6	-4.25568	2.4552
405	7/8/02	EPA	B-C/9-13 EPA#2	31.5	-2.08	1.2	1.48	0.36	2.01	0.48	3.49	0.6	12.44	2.91	1.006031809	0.9207	4.23522
406	7/8/02	EPA	B-C/9-13 EPA#3	31.7	0.45	2.07	1.24	0.61	1.67	0.8	2.91	1.006031809	11.39	2.42	0.934077085	3.04854	4.07154
407	7/8/02	EPA	B-C/9-13 EPA#4	31.6	1.49	1.99	1.77	0.57	0.65	0.74	2.42	0.934077085	11.94	3.26	1.144027972	-0.75702	4.62396
408	7/8/02	EPA	B-C/9-13 EPA#5 C-D/2-6 EPA #1	31.7	-0.37	2.26	1.38	0.68	1.88	0.92	3.26	1.144027972	10.34	1.42	0.858020979	3.08946	3.64188
163	6/18/02	EPA	S1084 C-D/2-6 EPA #2	26.6	2.16	3.7	15.41	1.05	5.88	1.29	21.29	1.663309953	15.71	36.72	1.833575742	0.45012	8.30676
164	6/18/02	EPA	S1085 C-D/2-6 EPA	28.4	0.22	4.06	25.28	1.16	11.44	1.42	36.72	1.833575742	14.77	22.92	1.721046193	0.7161	7.69296
165	6/18/02	EPA	#3S1086 C-D/2-6 EPA #4	27.8	0.35	3.76	15	1.08	7.92	1.34	22.92	1.721046193	10.23	32.27	1.166619047	2.39382	5.23776
166	6/18/02	EPA	S1087	27.6	1.17	2.56	20.61	0.73	11.66	0.91	32.27	1.166619047	13.54	22.76	1.379057649	10.90518	6.28122

Nutrani Gamma Spec Report- 341 East Ohio Street Site
EPA

Complete File of Nutrani Samples																	
Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
167	6/18/02	EPA	C-D/2-6 EPA #5 S1088	28.3	5.33	3.07	15.29	0.87	7.47	1.07	22.76	1.379057649	15.73	6.56	1.504160896	4.46028	6.5472
250	6/24/02	EPA	C-D/2-6 EPA#1 S1118	31.5	0.5	1.62	2.19	0.48	2.23	0.64	4.42	0.8	8.25	4.42	0.8	1.023	3.31452
251	6/24/02	EPA	C-D/2-6 EPA#2 S1119	31.5	3.4	1.9	1.46	0.53	1.7	0.7	3.16	0.878009112	11.01	3.16	0.878009112	6.9564	3.8874
252	6/24/02	EPA	C-D/2-6 EPA#3 S1120	31.5	1.85	2.21	2	0.64	0.84	0.81	2.84	1.032327467	12.34	2.84	1.032327467	3.7851	4.52166
253	6/24/02	EPA	C-D/2-6 EPA#4 S1121	30.1	2.95	2.31	2.06	0.66	1.36	0.88	3.42	1.1	12.13	3.42	1.1	6.0357	4.72626
254	6/24/02	EPA	C-D/2-6 EPA#5 S1122	30	0.51	1.71	2.58	0.5	1.21	0.64	3.79	0.81215762	9.75	3.79	0.81215762	1.04346	3.49866
245	6/24/02	EPA	C-D/6-9 EPA#1 S1113	28.7	-2.9	2.63	1.67	0.8	3.01	1.07	4.68	1.336001497	16.54	2.33	1.348072698	-1.04346	5.60604
246	6/24/02	EPA	C-D/6-9 EPA#2 S1114	28.6	-0.51	2.74	1.29	0.82	1.04	1.07	2.33	1.348072698	9.08	3.39	0.772010363	-2.08692	3.23268
247	6/24/02	EPA	C-D/6-9 EPA#3 S1115	28.5	-1.02	1.58	1.1	0.46	2.29	0.62	3.39	0.772010363	12.46	2.73	1.0020978	-2.61888	4.17384
248	6/24/02	EPA	C-D/6-9 EPA#4 S1116	27	-1.28	2.04	0.74	0.59	1.99	0.81	2.73	1.0020978	14.43	13.58	1.54029218	-1.69818	6.91548
249	6/24/02	EPA	C-D/6-9 EPA#5 S1117	28.3	-0.83	3.38	12.39	0.99	1.19	1.18	13.58	1.54029218	11.1	3.71	0.914002188	-3.64188	3.80556
419	7/8/02	EPA	C-E/11-13 EPA#1	33.3	2.37	2.08	1.72	0.59	3.07	0.78	4.79	0.97800818	10.03	4.26	0.852760224	1.8414	3.84648
420	7/8/02	EPA	C-E/11-13 EPA#2	32.5	0.9	1.88	4.38	0.54	-0.12	0.66	4.26	0.852760224	14.05	5.92	1.246314567	-6.138	5.17638
421	7/8/02	EPA	C-E/11-13 EPA#3	33	-3	2.53	3.46	0.77	2.46	0.98	5.92	1.246314567	12.22	3.9	0.990202	-1.78002	4.25568
422	7/8/02	EPA	C-E/11-13 EPA#4	32.8	-0.87	2.08	2.56	0.61	1.34	0.78	3.9	0.990202	10.79	5.24	0.962133047	0.38874	4.1943
423	7/8/02	EPA	C-E/11-13 EPA#5	32.1	0.19	2.05	3.42	0.59	1.82	0.76	5.24	0.962133047	13.16	0.74	1.074150827	0.36828	4.3989
414	7/8/02	EPA	C-E/9-11 EPA#1	30.8	4.3	1.88	2.25	0.54	3.43	0.71	5.68	0.892020179	13.21	5.76	1.202538981	3.6828	5.23776
415	7/8/02	EPA	C-E/9-11 EPA#2	30.3	1.8	2.56	3.91	0.75	1.85	0.94	5.76	1.202538981	12.53	4.17	1.126143863	-0.65472	4.74672
416	7/8/02	EPA	C-E/9-11 EPA#3	31.5	-0.32	2.32	3.11	0.69	1.06	0.89	4.17	1.126143863	12.17	4.44	1.048093507	12.03048	4.58304
417	7/8/02	EPA	C-E/9-11 EPA#4	29.7	5.88	2.24	2.37	0.64	2.07	0.83	4.44	1.048093507	14.12	6.28	1.362093976	-4.68534	5.64696
418	7/8/02	EPA	C-E/9-11 EPA#5 D-E/2-6 EPA#1	30.9	-2.29	2.76	3.88	0.83	2.4	1.08	6.28	1.362093976	11.78	4.79	0.97800818	4.84902	4.25568
262	6/25/02	EPA	D-E/2-6 EPA#2 S1128	31.6	-1.78	1.86	1.05	0.55	2.66	0.73	3.71	0.914002188	12.88	2.77	1.06400188	-0.98208	4.48074
263	6/25/02	EPA	D-E/2-6 EPA#3 S1129	30.6	-0.48	2.19	0.83	0.64	1.94	0.85	2.77	1.06400188	12.72	2.76	1.166061748	12.33738	5.09454
264	6/25/02	EPA	D-E/2-6 EPA#4 S1130	30.6	6.03	2.49	0.76	0.69	2	0.94	2.76	1.166061748	12.87	2.98	1.144027972	6.9564	4.86948
265	6/25/02	EPA	D-E/2-6 EPA#5 S1131	31.7	3.4	2.38	0.97	0.68	2.01	0.92	2.98	1.144027972	10.03	6.26	0.94810337	2.23014	4.07154
266	6/25/02	EPA	D-E/6-9 EPA#1 S1132	31.2	1.09	1.99	3.47	0.58	2.79	0.75	6.26	0.94810337	15.66	20.88	1.799138683	0.26598	8.02032
240	6/24/02	EPA	S1108	26.9	-1.62	1.87	1.17	0.56	2.26	0.77	3.43	0.952102936	11.4	3.02	0.95	1.10484	4.11246

Nutranl Gamma Spec Report- 341 East Ohio Street Site
EPA

Complete File of Nutranl Samples																	
Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty				
241	6/24/02	EPA	D-E/6-9 EPA#2 S1109	27.6	0.54	2.01	2.18	0.57	0.84	0.76	3.02	0.95	9.49	2.96	0.770064932	-2.16876	3.23268
242	6/24/02	EPA	D-E/6-9 EPA#3 S1110	25.6	-1.06	1.58	1.86	0.47	1.1	0.61	2.96	0.770064932	11.81	3.84	0.994032193	-11.27346	3.86694
243	6/24/02	EPA	D-E/6-9 EPA#4 S1111	26.3	-5.51	1.89	1.33	0.59	2.51	0.8	3.84	0.994032193	11.92	1.92	0.956033472	7.30422	4.25568
244	6/24/02	EPA	D-E/6-9 EPA#5 S1112	26.5	3.57	2.08	1.85	0.58	0.07	0.76	1.92	0.956033472	14.8	4.68	1.336001497	-5.9334	5.38098
675	8/7/02	EPA	E-F/1-2.5 EPA #1	36	0.3	2.22	-0.04	0.65	0.22	0.87	0.18	1.086001842	18.14	1.38	1.406022759	-5.25822	5.8311
676	8/7/02	EPA	E-F/1-2.5 EPA #2	34.9	-2.57	2.85	0.93	0.85	0.45	1.12	1.38	1.406022759	8.48	1.22	0.702139587	6.62904	2.9667
677	8/7/02	EPA	E-F/1-2.5 EPA #3	34.2	3.24	1.45	-0.35	0.41	1.57	0.57	1.22	0.702139587	17.3	0.03	1.308013761	7.38606	5.68788
678	8/7/02	EPA	E-F/1-2.5 EPA #4	34.5	3.61	2.78	0.31	0.78	-0.28	1.05	0.03	1.308013761	12.52	2.25	1.24036285	0.9207	4.8081
679	8/7/02	EPA	E-F/1-2.5 EPA #5	34.7	0.45	2.35	0.18	0.72	2.07	1.01	2.25	1.24036285	15.05	0.33	1.15	-2.78256	4.9104
682	8/8/02	EPA	EPA#1 E-F/13.5-15	34.7	2.79	1.59	0.69	0.45	2.3	0.61	2.99	0.758023746	8.56	2.08	0.692026011	-3.4782	2.92578
683	8/8/02	EPA	EPA#2 E-F/13.5-15	32.5	-1.7	1.43	1.51	0.42	0.57	0.55	2.08	0.692026011	10.23	2.42	0.872009174	1.65726	3.70326
684	8/8/02	EPA	EPA#3 E-F/13.5-15	32.4	0.81	1.81	1.42	0.52	1	0.7	2.42	0.872009174	11.72	2.98	0.97800818	0.73656	4.23522
685	8/8/02	EPA	EPA#4 E-F/13.5-15	33.2	0.36	2.07	1.77	0.59	1.21	0.78	2.98	0.97800818	11.92	3.36	1.052093152	1.45266	4.41936
686	8/8/02	EPA	EPA#5 E-G/10-12	32.5	0.71	2.16	1.2	0.62	2.16	0.85	3.36	1.052093152	11.44	0.48	0.952102936	9.39114	4.17384
582	7/22/02	EPA	EPA#1 E-G/10-12	34.3	2.34	2.65	2.27	0.75	1.36	0.97	3.63	1.22613213	11.04	4.67	0.970051545	-4.41936	3.9897
583	7/22/02	EPA	EPA#2 E-G/10-12	34.4	-2.16	1.95	2.63	0.59	2.04	0.77	4.67	0.970051545	12.75	4.08	1.06400188	-1.28898	4.5012
584	7/22/02	EPA	EPA#3 E-G/10-12	33.7	-0.63	2.2	1.96	0.64	2.12	0.85	4.08	1.06400188	13.26	4.28	1.130044247	-1.023	4.68534
585	7/22/02	EPA	EPA#4 E-G/10-12	31.9	-0.5	2.29	1.59	0.67	2.69	0.91	4.28	1.130044247	12.79	4.52	1.078007421	8.06124	4.62396
586	7/22/02	EPA	EPA#5 E-G/2-4 EPA #1	33.7	3.94	2.26	1.57	0.65	2.95	0.86	4.52	1.078007421	13.68	0.52	1.224132346	-3.04854	4.78764
497	7/12/02	EPA	S1236 E-G/2-4 EPA #2	28.5	1.16	2.02	1.94	0.59	1.24	0.78	3.18	0.97800818	12.27	3.88	1.058017013	11.37576	4.68534
498	7/12/02	EPA	S1237 E-G/2-4 EPA #3	23.8	5.56	2.29	1.53	0.63	2.35	0.85	3.88	1.058017013	13.63	3.23	1.198540779	4.48074	4.95132
499	7/12/02	EPA	S1238 E-G/2-4 EPA #4	30.1	2.19	2.42	0.01	0.69	3.22	0.98	3.23	1.198540779	14.14	2.74	1.220040983	11.60082	5.40144
500	7/12/02	EPA	S1239 E-G/2-4 EPA #5	28.3	5.67	2.64	1.39	0.74	1.35	0.97	2.74	1.220040983	10.2	2.81	0.846286004	6.01524	3.53958
501	7/12/02	EPA	S1240 E-G/4-6 EPA #1	28.6	2.94	1.73	-0.25	0.49	3.06	0.69	2.81	0.846286004	11.05	1.38	0.884081444	0.26598	3.6828
492	7/12/02	EPA	S1231 E-G/4-6 EPA #2	32	3.04	2.47	1.83	0.7	2.53	0.95	4.36	1.180042372	10.17	5.54	0.890224691	0.7161	3.84648
493	7/12/02	EPA	S1232 E-G/4-6 EPA #3	32.1	0.35	1.88	3.16	0.55	2.38	0.7	5.54	0.890224691	9.15	4.26	0.826196103	4.97178	3.64188
494	7/12/02	EPA	S1233	31.3	2.43	1.78	3.38	0.51	0.88	0.65	4.26	0.826196103	12.41	6.9	1.212105606	11.90772	5.36052

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EPA

Complete File of Nutranl Samples															
Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty		
597	7/23/02	EPA	G-I-5/6-8 EPA#2	35.6	0.6	2.01	1.57	0.59	3.91	0.81	5.48	1.0020978	10.3	3.11	0.9
598	7/23/02	EPA	G-I-5/6-8 EPA#3	35.7	0.56	1.82	1.7	0.54	1.41	0.72	3.11	0.9	13.91	1.47	1.078007421
599	7/23/02	EPA	G-I-5/6-8 EPA#4	34.9	3.69	2.34	0.61	0.65	0.86	0.86	1.47	1.078007421	13.78	2.73	1.172006826
600	7/23/02	EPA	G-I-5/6-8 EPA#5	37	0.22	2.39	1.05	0.7	1.68	0.94	2.73	1.172006826	16.14	3.39	1.636001222
562	7/22/02	EPA	G-I-5/8-9 EPA#1	30.3	-1.73	1.63	0.86	0.49	1.47	0.66	2.33	0.822009732	11.3	2.55	0.964002075
563	7/22/02	EPA	G-I-5/8-9 EPA#2	32	0.46	2.01	1.5	0.58	1.05	0.77	2.55	0.964002075	9.75	2.22	0.808022277
564	7/22/02	EPA	G-I-5/8-9 EPA#3	31.1	-1	1.65	1.32	0.48	0.9	0.65	2.22	0.808022277	10.34	2.9	0.85
565	7/22/02	EPA	G-I-5/8-9 EPA#4	31.3	-1.38	1.72	1.2	0.51	1.7	0.68	2.9	0.85	11.52	2.54	0.958018789
566	7/22/02	EPA	G-I-5/8-9 EPA#5	30.1	-1.43	1.97	1.53	0.57	1.01	0.77	2.54	0.958018789	10.94	3.7	0.954253635
572	7/22/02	EPA	G-I-11-13 EPA#1	33	-1.17	2.14	0.87	0.64	2.17	0.85	3.04	1.06400188	13.98	2.24	1.092016483
573	7/22/02	EPA	G-I-11-13 EPA#2	33.6	-0.41	2.2	0.64	0.66	1.6	0.87	2.24	1.092016483	12.99	3	1.022007828
574	7/22/02	EPA	G-I-11-13 EPA#3	33.2	-2.73	2.02	0.33	0.61	2.67	0.82	3	1.022007828	10.13	3.19	0.820060973
575	7/22/02	EPA	G-I-11-13 EPA#4	34.9	-5.88	1.59	1.75	0.5	1.44	0.65	3.19	0.820060973	15.1	2.05	1.188107739
576	7/22/02	EPA	G-I-11-13 EPA#5	32.8	4.57	2.58	0.85	0.7	1.2	0.96	2.05	1.188107739	13.05	3.09	1.188486432
567	7/22/02	EPA	G-I-9-11 EPA#1	29.4	0.25	2.02	2.84	0.59	0.86	0.75	3.7	0.954253635	12.18	4.12	1.038123307
568	7/22/02	EPA	G-I-9-11 EPA#2	29.6	0.01	2.11	1.72	0.61	2.4	0.84	4.12	1.038123307	10.88	3.59	1.042017274
569	7/22/02	EPA	G-I-9-11 EPA#3	29.9	3.65	2.2	2.02	0.63	1.57	0.83	3.59	1.042017274	9.99	4.52	0.908019824
570	7/22/02	EPA	G-I-9-11 EPA#4	31.5	1.37	1.85	1.52	0.54	3	0.73	4.52	0.908019824	10.41	3.76	0.834086326
571	7/22/02	EPA	G-I-9-11 EPA#5	30.3	-1.85	1.71	1.71	0.51	2.05	0.66	3.76	0.834086326	12.69	3.04	1.06400188
644	8/1/02	EPA	H-19 EPA#1 S1352	24.5	3.64	2.5	0.83	0.69	1.2	0.95	2.03	1.174137982	10.52	3.17	0.934077085
645	8/1/02	EPA	H-19 EPA#2 S1353	31.2	-0.52	1.97	2.45	0.57	0.72	0.74	3.17	0.934077085	11.3	3.74	1.010198
646	8/1/02	EPA	H-19 EPA#3 S1354	30.6	2.77	2.07	0.98	0.59	2.76	0.82	3.74	1.010198	11.04	3.36	0.992018145
647	8/1/02	EPA	H-19 EPA#4 S1355	33.3	-1.95	1.95	1.96	0.6	1.4	0.79	3.36	0.992018145	10.8	2.55	0.876184912
648	8/1/02	EPA	H-19 EPA#5 S1356	31.7	-1.53	1.81	1.83	0.54	0.72	0.69	2.55	0.876184912	11.43	2.57	0.97800818
687	8/8/02	EPA	H-I-8-10 EPA#1	34.6	4.59	2.04	0.07	0.56	0.41	0.77	0.48	0.952102936	11.69	0.67	0.930053762
688	8/8/02	EPA	H-I-8-10 EPA#2	33.7	2.32	1.91	0.17	0.55	0.5	0.75	0.67	0.930053762	10.46	1.39	0.860232527
689	8/8/02	EPA	H-I-8-10 EPA#3	34.2	2.77	1.73	-0.21	0.5	1.6	0.7	1.39	0.860232527	9.72	0.96	0.75
690	8/8/02	EPA	H-I-8-10 EPA#4	34.1	0.85	1.55	0.19	0.45	0.77	0.6	0.96	0.75	11.23	0.82	0.880056816
691	8/8/02	EPA	H-I-8-10 EPA#5	32.1	0.34	1.81	0.03	0.52	0.79	0.71	0.82	0.880056816	15.53	1.29	1.238103388
763	8/26/02	EPA	I-5-K/9.5-11 EPA#1 S1437	36.4	4.52	1.39	-0.5	0.38	0.96	0.51	0.46	0.636003145	12.51	2.04	1.05
764	8/26/02	EPA	I-5-K/9.5-11 EPA#2 S1438	37.5	-0.64	2.11	0.6	0.63	1.44	0.84	2.04	1.05	13.59	2.24	1.118302285
765	8/26/02	EPA	I-5-K/9.5-11 EPA#3 S1439	37.7	-1.35	2.22	0.11	0.65	2.13	0.91	2.24	1.118302285	9.64	2.02	0.8
766	8/26/02	EPA	I-5-K/9.5-11 EPA#4 S1440	36.4	-1.26	1.64	0.91	0.48	1.11	0.64	2.02	0.8	12.75	1.53	1.030048543
767	8/26/02	EPA	I-5-K/9.5-11 EPA#5 S1441	37.2	1.88	2.15	0.16	0.61	1.37	0.83	1.53	1.030048543	14.91	-0.34	1.25
870	9/19/02	EPA	I-J.5/17.5-19 EPA#1 S1510	35.1	1.19	1.65	-0.11	0.47	0.33	0.64	0.22	0.794040301	12.65	1.46	1.040432602
871	9/19/02	EPA	I-J.5/17.5-19 EPA#2 S1511	34.1	2.18	2.13	-0.1	0.6	1.56	0.85	1.46	1.040432602	11.92	1.2	0.994032193
872	9/19/02	EPA	I-J.5/17.5-19 EPA#3 S1512	32.1	-1.48	1.99	0.48	0.59	0.72	0.8	1.2	0.994032193	12.55	2.15	1.036001931

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Complete File of Nutranl Samples																
Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty				
873	9/19/02	EPA	I-J 5/17.5-19 EPA#4 S1513	35	-2.74	2.04	1.04	0.62	1.11	0.83	2.15	1.036001931	9.75	0.71	0.766093989	5.7288 3.29406
874	9/19/02	EPA	I-J 5/17.5-19 EPA#5 S1514	34.2	2.8	1.61	-0.36	0.45	1.07	0.62	0.71	0.766093989	10.74	0.36	0.836002392	-0.34782 3.60096
741	8/21/02	EPA	I-J 5/9-12 EPA#1 S1421	33.8	-1.93	2.31	1.42	0.68	0.54	0.9	1.96	1.128007092	8.93	3.88	0.7823682	8.92056 3.31452
742	8/21/02	EPA	I-J 5/9-12 EPA#2 S1422	34	4.36	1.62	-0.12	0.45	4	0.64	3.88	0.7823682	12.18	1.93	1.014001972	-1.92324 4.13292
743	8/21/02	EPA	I-J 5/9-12 EPA#3 S1423	33.3	-0.94	2.02	0.29	0.61	1.64	0.81	1.93	1.014001972	12.82	3.14	1.116064514	-7.54974 4.3989
744	8/21/02	EPA	I-J 5/9-12 EPA#4 S1424	34	-3.69	2.15	0.95	0.66	2.19	0.9	3.14	1.116064514	10.56	2.33	0.880056816	0.45012 3.64188
745	8/21/02	EPA	I-J 5/9-12 EPA#5 S1425	33.5	0.22	1.78	0.55	0.52	1.78	0.71	2.33	0.880056816	7.58	0.41	0.564003546	0.67518 2.43474
875	9/19/02	EPA	J.5-L/17.5-19 EPA#1 S1515	34	-0.17	1.76	0.49	0.5	-0.13	0.67	0.36	0.836002392	11.82	3.1	1.058017013	3.9897 4.33752
876	9/19/02	EPA	J.5-L/17.5-19 EPA#2 S1516	33.1	1.95	2.12	0.56	0.63	2.54	0.85	3.1	1.058017013	11.46	2.17	0.914002188	-1.3299 3.8874
877	9/19/02	EPA	J.5-L/17.5-19 EPA#3 S1517	34	-0.65	1.9	0.82	0.55	1.35	0.73	2.17	0.914002188	14.56	2.77	1.248078523	-4.17384 5.0127
878	9/19/02	EPA	J.5-L/17.5-19 EPA#4 S1518	32	-2.04	2.45	1.55	0.76	1.22	0.99	2.77	1.248078523	16.78	2.69	1.396173342	-0.98208 5.79018
879	9/19/02	EPA	J.5-L/17.5-19 EPA#5 S1519	34	-0.48	2.83	-0.23	0.82	2.92	1.13	2.69	1.396173342	19.1	0.07	1.600781059	0.87978 6.46536
860	9/19/02	EPA	K-18.5 SPOT	35.8	-7.95	3.29	5.54	1.02	3.18	1.31	8.72	1.660271062	17.59	7.09	1.572672884	12.19416 7.161
861	9/19/02	EPA	K-18.5 SPOT2	35.8	5.96	3.5	5.06	0.98	2.03	1.23	7.09	1.572672884	23.75	4.43	1.986579976	1.41174 8.71596
862	9/19/02	EPA	K-18.5 SPOT3	36.4	0.69	4.26	3.99	1.23	0.44	1.56	4.43	1.986579976	12.57	1.33	0.960208311	1.2276 4.05108
829	9/11/02	EPA	L.5-N/7-9 EPA#1 S1481	31.8	2.77	2.18	0.29	0.63	0.67	0.84	0.96	1.05	12.06	1.58	0.958018789	-8.184 3.72372
830	9/11/02	EPA	L.5-N/7-9 EPA#2 S1482	32.8	-4	1.82	-0.01	0.57	1.59	0.77	1.58	0.958018789	10.4	1.48	0.852115016	-2.43474 3.51912
831	9/11/02	EPA	L.5-N/7-9 EPA#3 S1483	34.1	-1.19	1.72	0.16	0.5	1.32	0.69	1.48	0.852115016	11.49	1.26	0.914002188	-2.98716 3.70326
832	9/11/02	EPA	L.5-N/7-9 EPA#4 S1484	35	-1.46	1.81	0.65	0.55	0.61	0.73	1.26	0.914002188	11.38	1.57	1.010198	3.13038 4.092
833	9/11/02	EPA	L.5-N/7-9 EPA#5 S1485	34.6	1.53	2	0.02	0.59	1.55	0.82	1.57	1.010198	10.27	0.43	0.794040301	-0.38874 3.33498
834	9/11/02	EPA	L.5-N/9-10.5 EPA#1 S1486	35.8	-0.19	1.63	0.19	0.47	0.24	0.64	0.43	0.794040301	10.43	1.09	0.908019824	1.30944 3.7851
835	9/11/02	EPA	L.5-N/9-10.5 EPA#2 S1487	35.3	0.64	1.85	1	0.54	0.09	0.73	1.09	0.908019824	11.94	2.04	1.016070864	4.3989 4.21476
836	9/11/02	EPA	L.5-N/9-10.5 EPA#3 S1488	36.1	2.15	2.06	0.26	0.6	1.78	0.82	2.04	1.016070864	6.33	2.28	0.530094331	-4.97178 2.08692
837	9/11/02	EPA	L.5-N/9-10.5 EPA#4 S1489	35.2	-2.43	1.02	-0.04	0.31	2.32	0.43	2.28	0.530094331	12.04	1.69	0.938136451	-3.49866 3.86694
838	9/11/02	EPA	L.5-N/9-10.5 EPA#5 S1490	35.7	-1.71	1.89	-0.11	0.55	1.8	0.76	1.69	0.938136451	17.24	0.11	1.312097557	-0.77748 5.70834
797	9/5/02	EPA	L-L 7.5/5.75-6.5 EPA#1 S1457	24.4	2.07	2.32	1.41	0.66	1.16	0.87	2.57	1.092016483	13.7	3.74	1.142015762	2.6598 4.9104
798	9/5/02	EPA	L-L 7.5/5.75-6.5 EPA#2 S1458	27.8	1.3	2.4	1.99	0.69	1.75	0.91	3.74	1.142015762	10.74	4.34	0.958018789	3.15084 4.03062
799	9/5/02	EPA	L-L 7.5/5.75-6.5 EPA#3 S1459	28.1	1.54	1.97	1.75	0.57	2.59	0.77	4.34	0.958018789	10.88	4.42	0.95	-2.06646 3.96924
800	9/5/02	EPA	L-L 7.5/5.75-6.5 EPA#4 S1460	27	-1.01	1.94	2.21	0.57	2.21	0.76	4.42	0.95	12.11	3.84	1.06212052	1.47312 4.54212

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801	9/5/02	EPA	L-L.75/5.75-6.5 EPA#5 S1461	29.1	0.72	2.22	2.63	0.65	1.21	0.84	3.84	1.06212052	12.75	1.69	1.080046295	-4.01016	4.41936

Overburden



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Overburden

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
126	6/14/02	overburden	B-02 OB #1 S1066	22	3.29	2.73	2.91	0.77	2.25	1.02	5.16	1.27800626	14.34	3.27	1.162497	0.12276	4.78764
127	6/14/02	overburden	B-02 OB #2 S1067	25	0.06	2.34	-0.07	0.67	3.34	0.95	3.27	1.162497312	15.18	2.8	1.428006	10.80288	6.3426
128	6/14/02	overburden	B-02 OB #3 S1068	27	5.28	3.1	2.49	0.86	0.31	1.14	2.8	1.428005602	20.29	3.4	1.830027	15.38592	7.99986
129	6/14/02	overburden	B-02 OB #4 S1069	27	7.52	3.91	1.14	1.09	2.26	1.47	3.4	1.830027322	15.97	3.78	1.378006	0.04092	5.74926
130	6/14/02	overburden	B-02 OB QC S1070	26	0.02	2.81	1.6	0.83	2.18	1.1	3.78	1.378005806	14.96	-0.03	1.340336	2.12784	5.36052
307	6/27/02	overburden	B-19 OB QC S1149	26	-1.04	2.56	0.68	0.77	0.82	1.03	1.5	1.286001555	11.02	4.03	0.952103	-2.12784	3.92832
304	6/27/02	overburden	B-19 OB#1 S1146	26	1.94	3.54	0.41	0.99	2.38	1.37	2.79	1.690266251	13.42	0.76	0.980051	2.98716	4.27614
305	6/27/02	overburden	B-19 OB#2 S1147	25	1.46	2.09	-0.02	0.58	0.78	0.79	0.76	0.980051019	19.09	2.77	1.448068	-11.3758	5.87202
306	6/27/02	overburden	B-19 OB#3 S1148	27	-5.56	2.87	1.6	0.88	1.17	1.15	2.77	1.448067678	17.14	1.5	1.286002	-2.12784	5.23776
294	6/26/02	overburden	C-14 OB QC S1143	37	3.55	2.52	0.73	0.73	2.14	1	2.87	1.238103388	14.62	-1.31	1.048618	2.33244	4.35798
290	6/26/02	overburden	C-14 OB#1 S1139	37	5.28	3.48	2.16	0.97	1.79	1.25	3.95	1.582213639	11.87	3.85	1.036002	-5.19684	4.21476
291	6/26/02	overburden	C-14 OB#2 S1140	38	-2.54	2.06	1.44	0.62	2.41	0.83	3.85	1.036001931	14.88	5.57	1.39807	15.81558	6.32214
292	6/26/02	overburden	C-14 OB#3 S1141	35	7.73	3.09	3.51	0.85	2.06	1.11	5.57	1.398070098	14.34	1.84	1.132254	9.39114	4.88994
293	6/26/02	overburden	C-14 OB#4 S1142	37	4.59	2.39	-0.09	0.66	1.93	0.92	1.84	1.132254388	14.15	2.87	1.238103	7.2633	5.15592
311	6/27/02	overburden	C-20 OB QC S1153	23	-6.13	2.93	1.47	0.94	2.54	1.29	4.01	1.596151622	15.35	-0.5	1.242014	7.73388	5.3196
308	6/27/02	overburden	C-20 OB#1 S1150	28	-1.04	1.92	1.52	0.56	2.51	0.77	4.03	0.952102936	15.34	2.48	1.34618	-5.29914	5.4219
309	6/27/02	overburden	C-20 OB#2 S1151	29	-2.59	2.65	0.67	0.79	1.81	1.09	2.48	1.34617978	19.12	4.64	1.696231	-11.5804	6.69042
310	6/27/02	overburden	C-20 OB#3 S1152	28	-5.66	3.27	3.01	1.04	1.63	1.34	4.64	1.696231116	16.82	4.01	1.596152	-12.542	5.99478
549	7/18/02	overburden	D-19 OB QC S1277	30	-1.9	2.48	1.24	0.73	1.1	0.97	2.34	1.214001647	16.29	6.2	1.504161	9.86172	6.83364
546	7/18/02	overburden	D-19 OB#1 S1274	30	-0.67	3.89	3.62	1.13	0.7	1.48	4.32	1.862068742	20.74	3.62	1.594553	2.92578	7.0587
547	7/18/02	overburden	D-19 OB#2 S1275	30	1.43	3.45	2.74	0.99	0.88	1.25	3.62	1.594553229	18.85	2.96	1.572005	-10.6392	6.2403
548	7/18/02	overburden	D-19 OB#3 S1276	30	-5.2	3.05	2.07	0.94	0.89	1.26	2.96	1.572005089	15.71	2.34	1.214002	-3.8874	5.07408
328	6/28/02	overburden	D-19.5 OB QC S1158	31	0.73	2.71	0.79	0.78	4.12	1.09	4.91	1.340335779	23.48	37.67	2.582596	-6.40398	12.03048
325	6/28/02	overburden	D-19.5 OB#1 S1155	30	-0.55	3.29	1.26	0.95	1.65	1.23	2.91	1.554155719	13.17	3.24	1.116065	-0.57288	4.66488

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Overburden

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
326	6/28/02	overburden	D-19.5 OB#2 S1156	30	-0.28	2.28	1.3	0.66	1.94	0.9	3.24	1.116064514	15.66	2.95	1.35	6.79272	5.87202
327	6/28/02	overburden	D-19.5 OB#3 S1157	30	3.32	2.87	1.3	0.81	1.65	1.08	2.95	1.35	16.15	4.91	1.340336	1.49358	5.54466
479	7/11/02	overburden	E-19 OB QC S1225	35	-2.98	2.53	2.94	0.75	0.88	0.97	3.82	1.22613213	14.81	5.42	1.330038	-0.47058	5.4219
475	7/11/02	overburden	E-19 OB#1 S1221	35	-0.35	2.58	2.65	0.76	0.81	1	3.46	1.256025477	15.3	3.96	1.396281	-6.8541	5.8311
476	7/11/02	overburden	E-19 OB#2 S1222	36	-3.35	2.85	4.21	0.86	-0.25	1.1	3.96	1.396280774	13	4.75	1.142016	-9.84126	4.66488
477	7/11/02	overburden	E-19 OB#3 S1223	37	-4.81	2.28	3.15	0.69	1.6	0.91	4.75	1.142015762	16.91	3.59	1.428006	8.34768	6.26076
478	7/11/02	overburden	E-19 OB#4 S1224	36	4.08	3.06	1.2	0.86	2.39	1.14	3.59	1.428005602	14.37	3.82	1.226132	-6.09708	5.17638
180	6/19/02	overburden	F-25 OB #1 S1089	31	3.99	3.36	1.06	0.98	0.9	1.27	1.96	1.604150866	15.3	2.03	1.172007	-9.9231	4.9104
181	6/19/02	overburden	F-25 OB #2 S1090	31	-4.85	2.4	1.42	0.7	0.61	0.94	2.03	1.172006826	14.55	2.86	1.35	4.48074	5.74926
182	6/19/02	overburden	F-25 OB #3 S1091	32	2.19	2.81	1.28	0.81	1.58	1.08	2.86	1.35	13.66	1.28	1.142016	3.08946	4.86948
183	6/19/02	overburden	F-25 OB #4 S1092	30	1.51	2.38	1.09	0.69	0.19	0.91	1.28	1.142015762	10.31	1.51	0.852115	3.72372	3.62142
184	6/19/02	overburden	F-25 OB #5 S1093	29	1.82	1.77	0.25	0.5	1.26	0.69	1.51	0.852115016	16.97	1.22	1.388092	-0.77748	5.56512
185	6/19/02	overburden	F-25 OB QC S1094	28	-0.38	2.72	-0.04	0.82	1.26	1.12	1.22	1.388092216	15.2	14.15	1.578924	-0.6138	7.03824
382	7/3/02	overburden	G-11 OB QC S1176	36	4.28	3.35	-0.04	0.93	2.09	1.25	2.05	1.558011553	18.79	5.96	1.45	-11.9282	6.05616
383	7/3/02	overburden	G-11 OB#1 (2) S1177	48	-5.83	2.96	2.21	0.87	3.75	1.16	5.96	1.45	26.72	6.22	2.184033	-1.98462	9.1047
379	7/3/02	overburden	G-11 OB#1 S1173	31	0.05	4.52	6.9	1.35	7.47	1.74	14.37	2.202294258	17.45	6.19	1.396173	12.11232	5.95386
380	7/3/02	overburden	G-11 OB#2 S1174	42	5.92	2.91	0.07	0.82	6.12	1.13	6.19	1.396173342	17.18	1.95	1.43405	5.38098	6.3426
381	7/3/02	overburden	G-11 OB#3 S1175	34	2.63	3.1	1.12	0.87	0.83	1.14	1.95	1.434050208	20.01	2.05	1.558012	8.75688	6.8541
384	7/3/02	overburden	G-11 OB#4 S1178	47	-0.97	4.45	2.53	1.32	3.69	1.74	6.22	2.184032967	14.97	6.75	1.356024	-0.04092	5.74926
385	7/3/02	overburden	G-11 OB#5 S1179	47	-0.02	2.81	3.75	0.82	3	1.08	6.75	1.356023599	13.36	1.39	1.201041	-6.56766	4.3989
721	8/16/02	overburden	I-02 S1407	35	-1	2.21	1.28	0.65	1.53	0.87	2.81	1.086001842	21.58	2.01	1.74201	-1.5345	7.161
604	7/23/02	overburden	I-06 OB QC S1326	34	0.38	2.42	-0.58	0.7	4.5	1	3.92	1.220655562	15.31	0.96	1.3	-2.27106	5.17638
601	7/23/02	overburden	I-06 OB#1 S1323	33	1.2	3.33	1.85	0.98	1.54	1.31	3.39	1.636001222	22.36	2.44	1.78404	-4.43982	7.32468
602	7/23/02	overburden	I-06 OB#2 S1324	32	-2.17	3.58	1.15	1.08	1.29	1.42	2.44	1.784040358	17.23	2.52	1.416051	2.3529	5.85156

Nutranl Gamma Spec Report- 341 East Ohio Street Site
Overburden

Complete File of Nutranl Samples

Complete List of Radium Samples																		
Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty						
603	7/23/02	overburden	I-06 OB#3 S1325	30	1.15	2.86	0.62	0.84	1.9	1.14	2.52	1.416050847	14.2	3.92	1.220656	0.77748	4.95132	
818	9/6/02	overburden	J.5/4 OB#4 S1476	35	-0.85	2.24	1.64	0.66	0.86	0.86	2.5	1.084066419	17.23	2.11	1.386001	-1.20714	5.79018	
819	9/6/02	overburden	J.5/4 OBQC S1477	35	-0.59	2.83	0.99	0.83	1.12	1.11	2.11	1.386001443	15.15	-0.59	1.174138	-0.02046	5.0127	
817	9/6/02	overburden	J.5/5 OB#3 S1475	34	1.56	2.3	0.47	0.68	1.42	0.92	1.89	1.144027972	13.07	2.5	1.084066	-1.7391	4.58304	
816	9/6/02	overburden	J.5/6 OB#2 S1474	35	-1.22	2.38	1.99	0.72	1.64	0.97	3.63	1.208014901	14.3	1.89	1.144028	3.19176	4.7058	
815	9/6/02	overburden	J.5/7 OB#1 S1473	32	4.23	2.42	0.94	0.69	0.85	0.91	1.79	1.142015762	11.47	3.63	1.208015	-2.49612	4.86948	
722	8/16/02	overburden	J-04 S1408	36	-0.75	3.5	0.57	1.05	1.44	1.39	2.01	1.742010333	16.23	0.97	1.236002	-6.87456	4.88994	
720	8/16/02	overburden	J-07 S1406	36	-4.58	2.81	1.22	0.87	0.34	1.16	1.56	1.45	12.94	2.81	1.086002	-2.046	4.52166	

EPA Sand



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EPA Sand

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
915	9/30/02	EPA Sand	A-B/5/25-27 S1543	35	-1.58	2.17	0.95	0.65	-0.07	0.85	0.88	1.070046728	13.37	1.11	1.1	-1.41174	4.4603
674	8/7/02	EPA Sand	A-B/12-15 S1389	39	-0.49	2.36	0.88	0.68	0.69	0.93	1.57	1.152085066	13.75	0.18	1.08600184	0.6138	4.5421
671	8/7/02	EPA Sand	A-B/1-4 S1386	31	-3.43	1.62	0.25	0.5	0.65	0.67	0.9	0.836002392	11.79	0.96	0.9160786	1.37082	3.8874
692	8/8/02	EPA Sand	A-B/15-21 S1390	33	-0.93	2.45	-0.08	0.73	1.37	1	1.29	1.238103388	14.87	2.35	1.33003759	3.3759	5.5856
672	8/7/02	EPA Sand	A-B/4-8 S1387	31	0.67	1.9	0.27	0.54	0.69	0.74	0.96	0.916078599	12.44	0.87	0.98812955	5.50374	4.2557
673	8/7/02	EPA Sand	A-B/8-12 S1388	36	2.69	2.08	0.23	0.58	0.64	0.8	0.87	0.988129546	14.18	1.57	1.15208507	-1.00254	4.8286
914	9/30/02	EPA Sand	A-C/5/21-22 S1542	32	-3.38	2.53	0.15	0.77	1.54	1.03	1.69	1.286001555	14.17	0.88	1.07004673	-3.23268	4.4398
925	10/1/02	EPA Sand	A-D/22-23 S1551	33	-0.76	2.34	-1.77	0.66	3.2	1.02	1.43	1.214907404	18.26	-0.56	1.32412235	13.56498	5.9334
926	10/1/02	EPA Sand	A-D/23-25 S1552	33	6.63	2.9	-0.01	0.78	-0.55	1.07	-0.56	1.324122351	13.43	2.3	1.12071406	-2.57796	4.5012
916	9/30/02	EPA Sand	B/5-D/25-27 S1544	32	-0.69	2.18	0.22	0.66	0.89	0.88	1.11	1.1	15.92	1.96	1.33809566	-10.6597	5.3605
640	8/1/02	EPA Sand	B-C/12-16 S1348	30	4.14	2.5	-0.41	0.71	1.63	0.97	1.22	1.202081528	10.68	0.89	0.81024688	1.6368	3.4168
614	7/26/02	EPA Sand	B-C/1-6 C S1330	28	0.46	2.05	0.65	0.63	0.67	0.83	1.32	1.042017274	14.59	-1.33	1.09041277	2.94624	4.5626
641	8/1/02	EPA Sand	B-C/16-21 S1349	28	0.8	1.67	-0.21	0.47	1.1	0.66	0.89	0.810246876	10.04	1.62	0.78816242	2.92578	3.3145
612	7/26/02	EPA Sand	B-C/6-12 A S1328	30	-4.28	1.76	0.8	0.55	0.85	0.74	1.65	0.922008677	12.24	1.25	0.97200823	-2.23014	3.9897
613	7/26/02	EPA Sand	B-C/6-12 B S1329	33	-1.09	1.95	0.94	0.58	0.31	0.78	1.25	0.97200823	12.72	1.32	1.04201727	0.94116	4.1943
927	10/1/02	EPA Sand	C/5-G/21-22 S1553	33	-1.26	2.2	0.04	0.64	2.26	0.92	2.3	1.120714058	17.95	0.63	1.436802	8.63412	6.4449
589	7/23/02	EPA Sand	C-E/ 1-10 A S1311	34	-0.28	1.79	1	0.52	0.1	0.69	1.1	0.864002315	11.95	1.08	0.93005376	2.046	3.9079
590	7/23/02	EPA Sand	C-E/ 1-10 B S1311	33	1	1.91	0.1	0.55	0.98	0.75	1.08	0.930053762	13.09	4.36	1.18600169	-0.59334	4.9718
780	8/30/02	EPA Sand	C-E/10-12 S1446	38	-0.19	2.18	0.86	0.66	0.2	0.85	1.06	1.076150547	11.38	0.28	0.85	6.6495	3.7033
781	8/30/02	EPA Sand	C-E/12-14 S1447	42	3.25	1.81	-0.01	0.51	0.29	0.68	0.28	0.85	12.47	1.84	1.07200746	7.161	4.6853
782	8/30/02	EPA Sand	C-E/14-16 S1448	41	3.5	2.29	0.63	0.64	1.21	0.86	1.84	1.072007463	20.07	0.5	1.50801194	-5.97432	5.9948
783	8/30/02	EPA Sand	C-E/16-18 S1449	37	-2.92	2.93	0.23	0.9	0.27	1.21	0.5	1.508011936	15.78	1.01	1.28809938	2.39382	5.5242
784	8/30/02	EPA Sand	C-E/18-20 S1450	36	1.17	2.7	0.36	0.76	0.65	1.04	1.01	1.288099375	9.94	3.11	0.92655275	-4.8081	3.6214
785	8/30/02	EPA Sand	C-E/20-21 S1451	33	-2.35	1.77	0.15	0.53	2.96	0.76	3.11	0.926552751	12.09	0.82	0.98005102	0.96162	4.0102
895	9/25/02	EPA Sand	D-F/24.5-27 S1527	35	-0.59	2.38	-0.23	0.7	2.21	1	1.98	1.220655562	12.25	0.88	1.01212647	-5.34006	4.2557

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EPA Sand

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
928	10/1/02	EPA Sand	D-G/22-23 S1554	35	4.22	3.15	1.16	0.9	-0.53	1.12	0.63	1.436802004	12.88	0.69	0.97005155	-15.1199	3.7646
929	10/1/02	EPA Sand	D-G/23-24.5 S1555	34	-7.39	1.84	1.35	0.59	-0.66	0.77	0.69	0.970051545	13.93	1.79	1.09041277	-11.3962	4.0715
746	8/21/02	EPA Sand	E-G/11-13 S1426	42	0.33	1.19	0.19	0.34	0.22	0.45	0.41	0.564003546	9.47	0.87	0.78600254	4.46028	3.3759
693	8/8/02	EPA Sand	E-G/1-3 S1391	34	1.65	2.73	0.67	0.79	1.68	1.07	2.35	1.330037593	15.16	1.05	1.18810774	1.57542	4.8695
747	8/21/02	EPA Sand	E-G/13-15 S1427	36	2.18	1.65	0.63	0.47	0.24	0.63	0.87	0.786002545	13.89	2.28	1.12893755	-4.46028	4.3989
748	8/21/02	EPA Sand	E-G/15-17 S1428	37	-2.18	2.15	-0.89	0.64	3.17	0.93	2.28	1.128937554	12.32	1.21	0.96400207	-8.2863	3.8669
749	8/21/02	EPA Sand	E-G/17-19 S1429	34	-4.05	1.89	1.19	0.58	0.02	0.77	1.21	0.964002075	13.67	2.02	1.11606451	-4.62396	4.5421
750	8/21/02	EPA Sand	E-G/19-21 S1430	34	-2.26	2.22	0.74	0.66	1.28	0.9	2.02	1.116064514	12.92	-0.02	1.03469802	-2.43474	4.0511
642	8/1/02	EPA Sand	E-G/3-7 S1350	31	1.43	1.62	-0.22	0.46	1.84	0.64	1.62	0.78816242	10.68	1.52	0.88005682	1.49358	3.56
643	8/1/02	EPA Sand	E-G/7-11 S1351	34	0.73	1.74	0.4	0.52	1.12	0.71	1.52	0.880056816	13.47	2.03	1.17413798	7.44744	5.115
894	9/25/02	EPA Sand	F-H/24.5-27 S1526	34	0.54	2.64	-0.23	0.74	1.44	1.06	1.21	1.292749009	14.94	1.98	1.22065556	-1.20714	4.8695
931	10/1/02	EPA Sand	G-H/21-24.5 S1557	32	0.19	2.31	-0.38	0.69	1.25	0.93	0.87	1.158015544	13.38	1.93	1.05603303	-4.01016	4.4194
712	8/14/02	EPA Sand	G-I/ 15-17.5 S1392	35	2.09	1.35	-0.3	0.38	0.69	0.52	0.39	0.644049688	13.21	0.47	0.99201814	-2.2506	4.2557
713	8/14/02	EPA Sand	G-I/ 17.5-20 S1397	35	-1.1	2.08	0.36	0.6	0.11	0.79	0.47	0.992018145	11.42	0.49	0.91400219	-5.07408	3.6214
699	8/8/02	EPA Sand	G-I/11-13 S1397	34	-3.59	1.73	0.04	0.53	0.83	0.72	0.87	0.894035793	15.07	1.55	1.16400172	-12.8489	4.6444
694	8/8/02	EPA Sand	G-I/1-3 S1392	32	0.77	2.38	-0.48	0.7	1.53	0.96	1.05	1.188107739	15.12	1.17	1.18004237	-3.15084	4.9513
700	8/8/02	EPA Sand	G-I/13-15 S1398	35	-6.28	2.27	1.05	0.7	0.5	0.93	1.55	1.164001718	18.95	4.65	1.52003289	14.56752	6.7313
930	10/1/02	EPA Sand	G-I/20-21 S1556	34	-5.57	1.99	-1.06	0.63	2.85	0.89	1.79	1.090412766	15.22	0.87	1.15801554	0.38874	4.7263
695	8/8/02	EPA Sand	G-I/3-5 S1393	33	-1.54	2.42	0.47	0.7	0.7	0.95	1.17	1.180042372	15.19	1	1.20104121	-0.94116	4.849
696	8/8/02	EPA Sand	G-I/5-7 S1394	34	-0.46	2.37	-0.64	0.68	1.64	0.99	1	1.201041215	17.81	2.27	1.45602198	-2.046	6.0357
697	8/8/02	EPA Sand	G-I/7-9 S1395	33	-1	2.95	1.55	0.88	0.72	1.16	2.27	1.456021978	17.35	1.14	1.39402296	1.90278	6.0357
698	8/8/02	EPA Sand	G-I/9-11 S1396	34	0.93	2.95	1.55	0.83	-0.41	1.12	1.14	1.394022955	11.88	0.87	0.89403579	-7.34514	3.5396
701	8/8/02	EPA Sand	G-I5 clay S1399	40	7.12	3.29	1.19	0.92	3.46	1.21	4.65	1.520032894	16.31	0.75	1.46478667	-4.8081	5.606
932	10/1/02	EPA Sand	H-I/21-24.5 S1558	34	-1.96	2.16	1.5	0.64	0.43	0.84	1.93	1.056030303	13.92	8.88	1.27440182	-1.98462	5.5037
896	9/25/02	EPA Sand	H-J/24.5-27 S1528	36	-2.61	2.08	1.88	0.62	-1	0.8	0.88	1.012126474	11.87	-0.1	0.96607453	-2.47566	3.9283
760	8/26/02	EPA Sand	I-J.5/1-4 S1434	35	-1.32	1.98	0.05	0.59	1.78	0.82	1.83	1.010198	10.94	0.85	0.83600239	-0.77748	3.4987

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EPA Sand

Complete File of Nutranl Samples

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761	8/26/02	EPA Sand	I-J 5/4-7 S1435	36	-0.38	1.71	0.19	0.5	0.66	0.67	0.85	0.836002392	9.86	0.25	0.72801099	-6.01524	3.0485
762	8/26/02	EPA Sand	I-J 5/7-9.5 S1436	34	-2.94	1.49	0.5	0.44	-0.25	0.58	0.25	0.728010989	8.87	0.46	0.63600314	9.24792	2.8439
917	9/30/02	EPA Sand	I-J/21-24 S1545	34	-5.21	2.62	0.73	0.79	1.23	1.08	1.96	1.338095662	10.86	-0.88	0.8261961	11.19162	3.7442
802	9/5/02	EPA Sand	I-L/11-12 S1462	33	-1.96	2.16	0.72	0.64	0.97	0.87	1.69	1.080046295	13.97	0.6	1.09201648	0.1023	4.5421
803	9/5/02	EPA Sand	I-L/12-13 S1463	34	0.05	2.22	0.18	0.66	0.42	0.87	0.6	1.092016483	14.31	1.96	1.34617978	-0.65472	5.4424
804	9/5/02	EPA Sand	I-L/13-14 S1464	34	-0.32	2.66	0.63	0.79	1.33	1.09	1.96	1.34617978	26.7	1.45	2.0041956	2.41428	8.7569
805	9/5/02	EPA Sand	I-L/14-15 S1465	34	1.18	4.28	0.03	1.18	1.42	1.62	1.45	2.004195599	22.19	2.44	1.97200406	-5.07408	7.7953
806	9/5/02	EPA Sand	I-L/15-16 S1466	33	-2.48	3.81	0.01	1.18	2.43	1.58	2.44	1.972004057	16.99	2.61	1.44402216	-7.50882	5.8516
807	9/5/02	EPA Sand	I-L/16-17.5 S1467	31	-3.67	2.86	0.96	0.86	1.65	1.16	2.61	1.44402216	17.79	2.1	1.47200543	-3.19176	6.0152
868	9/19/02	EPA Sand	I-L/17-19 S1508	34	1.2	2.2	-0.12	0.61	0.44	0.83	0.32	1.030048543	18.13	1.34	1.45660564	-3.5805	5.9129
869	9/19/02	EPA Sand	I-L/19-21 S1509	35	-1.75	2.89	0.2	0.84	1.14	1.19	1.34	1.456605643	10.61	0.22	0.7940403	2.43474	3.3759
779	8/30/02	EPA Sand	I-L/9.5-11 S1445	35	4.71	2.36	-0.44	0.66	1.43	0.89	0.99	1.108016245	13.56	1.06	1.07615055	-0.38874	4.4603
776	8/30/02	EPA Sand	J 5-L/1-4 S1442	36	-3.56	2.32	0.57	0.71	0.91	0.96	1.48	1.1940268	15.92	1.99	1.2980755	-2.31198	5.2787
777	8/30/02	EPA Sand	J 5-L/4-7 S1443	37	-1.13	2.58	1.64	0.79	0.35	1.03	1.99	1.298075499	19.02	2.01	1.53687996	3.5805	6.138
778	8/30/02	EPA Sand	J 5-L/7-9.5 S1444	36	1.75	3	-0.84	0.88	2.85	1.26	2.01	1.536879956	15.07	0.99	1.10801625	9.63666	4.8286
888	9/25/02	EPA Sand	J-N/21-22 S1520	34	0.47	2.49	0.41	0.71	1.6	1	2.01	1.226417547	9.82	1.71	0.8	-7.93848	3.1713
889	9/25/02	EPA Sand	J-N/22-23 S1521	35	-3.88	1.55	1.04	0.48	0.67	0.64	1.71	0.8	12.75	2.49	1.11251966	-6.26076	4.4194
890	9/25/02	EPA Sand	J-N/23-24 S1522	33	-3.06	2.16	0.71	0.64	1.78	0.91	2.49	1.112519663	10.15	1.92	0.85	-3.94878	3.4987
891	9/25/02	EPA Sand	J-N/24-25 S1523	34	-1.93	1.71	1.12	0.51	0.8	0.68	1.92	0.85	10.65	1.31	0.7940403	-3.04854	3.3145
892	9/25/02	EPA Sand	J-N/25-26 S1524	37	-1.49	1.62	0.1	0.47	1.21	0.64	1.31	0.794040301	13.58	2.35	1.24201449	-1.6368	5.1559
893	9/25/02	EPA Sand	J-N/26-27 S1525	33	-0.8	2.52	1.67	0.75	0.68	0.99	2.35	1.242014493	16.35	1.21	1.29274901	1.10484	5.4014
863	9/19/02	EPA Sand	L-N/11-13 S1503	36	0.6	1.98	-0.09	0.56	1.42	0.78	1.33	0.960208311	10.35	1.98	0.83815273	0.24552	3.4782
808	9/5/02	EPA Sand	L-N/1-3 S1468	33	-1.56	2.94	0.83	0.88	1.27	1.18	2.1	1.472005435	17.38	2.21	1.4345034	-7.4679	5.6674
864	9/19/02	EPA Sand	L-N/13-15 S1504	35	0.12	1.7	0.32	0.49	1.66	0.68	1.98	0.838152731	10.46	1.47	0.88005682	5.2173	3.826
865	9/19/02	EPA Sand	L-N/15-17 S1505	35	2.55	1.87	0.54	0.52	0.93	0.71	1.47	0.880056816	12.15	0.85	0.97200823	-2.02554	4.0306

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Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
866	9/19/02	EPA Sand	L-N/17-19 S1506	33	-0.99	1.97	0.26	0.58	0.59	0.78	0.85	0.97200823	12.93	2.28	1.13463651	2.70072	4.6444
867	9/19/02	EPA Sand	L-N/19-21 S1507	36	1.32	2.27	-0.55	0.65	2.83	0.93	2.28	1.134636506	14.03	0.32	1.03004854	2.4552	4.5012
809	9/5/02	EPA Sand	L-N/3-5 S1469	26	-3.65	2.77	-0.16	0.83	2.37	1.17	2.21	1.434503398	16.61	7.31	1.38841636	-2.70072	5.9334
839	9/11/02	EPA Sand	L-N/5-7 S1491	33	-0.38	2.79	1.08	0.8	-0.97	1.04	0.11	1.312097557	15.71	0.18	1.2080149	0.65472	5.1355
840	9/11/02	EPA Sand	L-N/7-9 S1492	35	0.32	2.51	0.06	0.72	0.12	0.97	0.18	1.208014901	12.72	0.99	1.0404326	12.70566	4.583
841	9/11/02	EPA Sand	L-N/9-11 S1493	35	6.21	2.24	-0.14	0.6	1.13	0.85	0.99	1.040432602	64.22	240.7	9.27373172	-186.493	44.194

Lift Soil



Nutranl Gamma Spec Report- 341 East Ohio Street Site
Lift Soil

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
623	7/29/02	lift soil	B-C/10-16 #1 S1337	31	-0.84	2.14	0.26	0.61	0.45	0.84	0.71	1.038123307	14.37	2.79	1.222007	-5.6265	4.9104
624	7/29/02	lift soil	B-C/10-16 #2 S1338	30	-2.75	2.4	0.78	0.73	2.01	0.98	2.79	1.222006547	12.73	2.52	1.052093	6.4449	4.41936
625	7/29/02	lift soil	B-C/10-16 #3 S1339	33	3.15	2.16	0.52	0.62	2	0.85	2.52	1.052093152	15.43	2.6	1.278006	-9.04332	5.05362
626	7/29/02	lift soil	B-C/10-16 #4 S1340	32	-4.42	2.47	1.09	0.77	1.51	1.02	2.6	1.27800626	13.98	0.69	1.130044	-4.092	4.64442
627	7/29/02	lift soil	B-C/10-16 #5 S1341	33	-2	2.27	0.68	0.67	0.01	0.91	0.69	1.130044247	14.03	3.41	1.292749	5.6265	5.36052
628	7/29/02	lift soil	B-C/10-16 #6 S1342	31	2.75	2.62	0.23	0.74	3.18	1.06	3.41	1.292749009	18.46	-0.85	1.426359	8.85918	5.95386
617	7/29/02	lift soil	B-C/1-10 #1 S1331	29	2.6	1.77	1.08	0.5	0.92	0.66	2	0.828009662	18.81	1.76	1.445164	2.98716	5.9334
618	7/29/02	lift soil	B-C/1-10 #2 S1332	29	1.46	2.9	-0.79	0.82	2.55	1.19	1.76	1.445164351	10.94	2.8	0.920054	-1.67772	3.90786
619	7/29/02	lift soil	B-C/1-10 #3 S1333	29	-0.82	1.91	1.73	0.56	1.07	0.73	2.8	0.920054346	17.53	3.29	1.469966	-5.03316	5.70834
620	7/29/02	lift soil	B-C/1-10 #4 S1334	29	-2.46	2.79	-0.81	0.82	4.1	1.22	3.29	1.469965986	14.91	1.69	1.284056	8.47044	5.68788
621	7/29/02	lift soil	B-C/1-10 #5 S1335	30	4.14	2.78	1.69	0.78	0	1.02	1.69	1.284056074	19.09	1.35	1.434503	18.90504	6.48582
622	7/29/02	lift soil	B-C/1-10 #6 S1336	28	9.24	3.17	-0.46	0.83	1.81	1.17	1.35	1.434503398	14.01	0.71	1.038123	-1.71864	4.37844
724	8/16/02	lift soil	E 5-20.5 S1410	33	0.63	2.84	0.75	0.86	1.66	1.18	2.41	1.46013698	16.56	2.38	1.350926	-2.53704	5.25822
716	8/15/02	lift soil	F-14 S1404	36	0.76	2.75	-0.26	0.81	3.52	1.12	3.26	1.382208378	10.75	1.3	0.968349	-4.7058	3.7851
723	8/16/02	lift soil	G 5-20.5 F-20 S1409	34	-3.36	2.39	0.35	0.74	0.62	0.99	0.97	1.236001618	15.83	2.41	1.460137	1.28898	5.81064
725	8/16/02	lift soil	K 5-17.5 S1411	35	-1.24	2.57	-1.31	0.77	3.69	1.11	2.38	1.350925609	31.92	48.7	4.302894	29.68746	21.19656
812	9/5/02	lift soil	S1472	31	-3.07	2.65	0.8	0.83	0.98	1.14	1.78	1.410141837	13.73	0.35	1.148564	-1.59588	4.64442

Background



Nutranl Gamma Spec Report- 341 East Ohio Street Site

Background

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
29	6/6/02	background	bkg060602	7.5	4.42	2.45	-0.49	0.7	0.42	0.95	-0.07	1.180042372	18.12	5.66	1.666433	19.58022	7.7748
34	6/7/02	background	bkg060702	7.5	-1.93	2.04	-0.33	0.6	0.07	0.84	-0.26	1.032279032	18.32	10.25	1.794492	-11.8259	7.44744
54	6/10/02	background	bkg061002	7.5	-0.03	1.89	-0.2	0.57	0.96	0.78	0.76	0.966074531	10.68	7.62	0.960469	4.01016	4.2966
72	6/11/02	background	bkg061102	7.5	-4.88	2	-0.4	0.64	1.07	0.87	0.67	1.080046295	12.97	9.49	1.256025	-0.32736	5.29914
99	6/12/02	background	bkg061202	7.5	2.25	2.9	-1.05	0.83	0.88	1.17	-0.17	1.434503398	16.46	9.31	1.666433	-2.10738	7.12008
107	6/13/02	background	bkg061302	7.5	2.5	1.62	-0.75	0.47	1.39	0.66	0.64	0.810246876	16.11	7.51	1.522695	10.61874	6.83364
114	6/14/02	background	bkg061402	7.5	-0.73	1.78	0.28	0.54	-0.37	0.73	-0.09	0.908019824	18.67	7.61	1.562082	7.22238	6.87456
131	6/17/02	background	bkg061702	7.5	1.04	2.62	-0.29	0.78	0.26	1.09	-0.03	1.340335779	17.54	7.98	1.620031	-1.39128	6.87456
153	6/18/02	background	bkg061802	20	-0.37	1.99	-0.31	0.56	-0.11	0.79	-0.42	0.968349111	16.18	7.69	1.438402	5.48328	6.21984
178	6/19/02	background	bkg061902	7.5	-1.64	1.85	0	0.57	-0.35	0.77	-0.35	0.958018789	12.4	8.44	1.16211	4.52166	5.05362
192	6/20/02	background	bkg062002	7.5	-1.83	2.71	-0.91	0.85	1.56	1.2	0.65	1.470544117	18.1	8.29	1.814745	-2.2506	7.89756
204	6/21/02	background	bkg062102	7.5	-6.34	2.44	0.8	0.81	-0.19	1.09	0.61	1.358013255	17.5	8.06	1.596246	3.25314	7.07916
223	6/24/02	background	bkg062402	7.5	-0.29	2.3	-0.58	0.64	0.09	0.91	-0.49	1.112519663	15.05	8.41	1.338432	-2.8644	5.79018
255	6/25/02	background	bkg062502	7.5	1.23	1.99	-0.18	0.58	-0.05	0.8	-0.23	0.988129546	13.13	-0.23	0.98813	2.51858	4.07154
282	6/26/02	background	bkg062602	7.5	1.63	2.34	-0.25	0.67	-0.81	0.9	-1.06	1.12200713	20.96	7.65	2.044431	-8.3886	8.5932
295	6/27/02	background	bkg062702	7.5	1.14	2.13	-1.58	0.6	0.27	0.86	-1.31	1.048618138	18.04	8.74	1.708567	-13.6264	7.22238
312	6/28/02	background	bkg062802	7.5	3.78	2.6	0.05	0.75	-0.55	0.99	-0.5	1.242014493	14.47	8.47	1.538376	-2.6598	6.42444
330	7/1/02	background	bkg070102	7.5	2.66	2.05	-0.9	0.57	0.74	0.82	-0.16	0.998649088	16.84	9.51	1.710263	0.4092	7.36556
356	7/2/02	background	bkg070202	7.5	3.85	2.18	-0.68	0.6	0.5	0.87	-0.18	1.056834897	14.48	7.44	1.412091	5.68788	6.15846
372	7/3/02	background	bkg070302	7.5	-1.5	2.42	-0.74	0.74	1.4	1.05	0.66	1.284562182	19.86	7.5	1.992787	6.58812	8.83872
386	7/8/02	background	bkg070802	7.5	-3.21	2.15	0.14	0.68	1.25	0.99	1.39	1.201041215	14.23	7.57	1.276127	1.1253	5.3196
424	7/9/02	background	bkg070902	7.5	0.18	2.15	-0.18	0.63	0.92	0.87	0.74	1.074150827	14.74	7.59	1.318218	4.8081	5.74926
441	7/10/02	background	bkg071002	7.5	-0.26	1.78	0.28	0.53	-0.54	0.69	-0.26	0.870057469	14.75	7.96	1.348073	-4.07154	5.70834
462	7/11/02	background	bkg071102	7.5	3.03	2.3	0.52	0.65	-1.37	0.87	-0.85	1.086001842	20.37	8.8	1.768163	-7.71342	7.36556
485	7/12/02	background	bkg071202	7.5	3.5	2.26	-1.24	0.63	1.55	0.94	0.31	1.131591799	15.64	7.24	1.502431	-1.3299	6.5472
517	7/15/02	background	bkg071502	7.5	-3.01	2.56	-0.75	0.81	2.01	1.14	1.26	1.398463442	19.64	6.79	1.721046	0.85932	7.71342
519	7/15/02	background	bkg(2)71502	7.5	-0.36	1.91	-0.17	0.57	0.22	0.79	0.05	0.97416631	16.64	9.04	1.730462	9.1047	7.73388
523	7/16/02	background	bkg071602	7.5	1.84	2.19	-0.13	0.62	0.09	0.86	-0.04	1.060188662	15.91	6.43	1.366528	13.03302	6.19938
533	7/17/02	background	bkg071702	7.5	2.23	2.05	0.34	0.57	-0.6	0.79	-0.26	0.97416631	15.3	8.56	1.366528	1.86186	6.11754
543	7/18/02	background	bkg071802	7.5	-1.3	2.36	-0.3	0.71	0.94	0.99	0.64	1.218277472	17.7	8.96	1.754138	8.47044	7.73388
553	7/19/02	background	bkg071902	7.5	-1.95	2.15	0.56	0.64	-1.1	0.84	-0.54	1.056030303	13.77	8.45	1.372771	-1.00254	6.0357
557	7/22/02	background	bkg072202	7.5	-2.64	3.5	1.61	1.09	-0.92	1.47	0.69	1.830027322	9.93	7.95	0.904268	-1.51404	3.92832
587	7/23/02	background	bkg072302	7.5	-1.49	2.34	0.16	0.72	0.36	0.99	0.52	1.224132346	14.02	7.36	1.210372	4.76718	5.36052
605	7/24/02	background	bkg072402	7.5	-1.11	2.53	0.26	0.78	0.7	1.04	0.96	1.3	12.15	7.87	1.176138	7.54974	5.17638
608	7/25/02	background	bkg072502	7.5	-5.95	2.23	0.72	0.71	-0.29	0.98	0.43	1.210165278	14.19	8.66	1.338432	-0.4092	5.7288
610	7/26/02	background	bkg072602	7.5	-4.66	2.33	-0.51	0.75	1.56	1.06	1.05	1.298499134	12.94	7.61	1.16211	12.60336	5.19684
615	7/29/02	background	bkg072902	7.5	1.44	2.23	-0.63	0.63	-0.7	0.89	-1.33	1.090412766	12.44	7.86	1.118258	10.27092	4.93086
629	7/30/02	background	bkg073002	7.5	4.33	2.91	-0.63	0.83	-0.22	1.16	-0.85	1.426359001	11.77	6.74	1.046375	3.74418	4.68534
632	7/31/02	background	bkg073102	7.5	1.19	2.53	-0.25	0.75	0.71	1.06	0.46	1.298499134	11.46	8.39	1.038557	6.36306	4.68534
638	8/1/02	background	bkg080102	7.5	-3.01	2.25	0.82	0.71	-1.1	0.92	-0.28	1.16211015	13.5	7.85	1.260357	7.24284	5.56512
651	8/2/02	background	bkg080202	7.5	-0.51	2.93	0.63	0.88	-1.31	1.15	-0.68	1.448067678	15.05	7.55	1.382245	2.4552	6.0357
656	8/5/02	background	bkg080502	7.5	-0.21	1.79	-0.4	0.54	1.27	0.76	0.87	0.932308962	10.4	8.05	0.948103	6.0357	4.15338
657	8/5/02	background	soilst080502	36.9	2.95	2.03	4.64	0.58	3.41	0.75	8.05	0.94810337	13.74	4.85	1.156028	1.08438	4.82856
660	8/6/02	background	bkg080602	7.5	0.32	2.8	-0.48	0.81	0.79	1.14	0.31	1.398463442	12.46	9.08	1.160388	3.35544	5.0127
664	8/7/02	background	bkg080702	7.5	-3.87	2.13	-0.96	0.67	0.77	0.93	-0.19	1.14621115	9.24	7.1	0.796492	2.31198	3.51912
680	8/8/02	background	bkg080802	7.5	-1.36	2.4	0.93	0.69	-0.6	0.92	0.33	1.15	13.02	8.3	1.182286	0.47058	5.09454
702	8/9/02	background	bkg080902	7.5	-2.35	2.74	0.84	0.84	-0.09	1.2	0.75	1.464786674	14.27	8.72	1.294681	1.9437	5.60604
704	8/12/02	background	bkg081202	7.5	-0.24	1.99	-0.34	0.59	1.66	0.84	1.32	1.026498904	16.8	7.03	1.510298	2.39382	6.56766
706	8/13/02	background	bkg081302	7.5	0.82	1.37	0.27	0.4	-0.45	0.54	-0.18	0.672011905	12.15	8.68	1.182286	1.18668	5.0127

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Background

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
710	8/14/02	background	bkg081402	7.5	-0.42	1.57	-0.59	0.47	0.57	0.66	-0.02	0.810246876	13.43	7.13	1.202539	1.39128	5.23776
714	8/15/02	background	bkg081502	7.5	-2.48	1.77	0.55	0.55	-0.06	0.73	0.49	0.914002188	11.14	7.46	0.996393	3.10992	4.35798
717	8/16/02	background	bkg081602	7.5	-2.3	1.85	0.36	0.56	0.94	0.79	1.3	0.968349111	13.12	8.25	1.224418	7.54974	5.46282
729	8/19/02	background	bkg081902	7.5	2.54	2.39	-0.69	0.67	0.5	0.96	-0.19	1.170683561	13.73	7.82	1.271417	-8.10216	5.60604
731	8/20/02	background	bkg082002	7.5	0.05	2.47	-0.23	0.71	1.52	1.03	1.29	1.2509996	14.37	7.91	1.358713	12.50106	6.11754
739	8/21/02	background	bkg082102	7.5	-1.13	1.71	0.3	0.51	-0.42	0.7	-0.12	0.866083137	15.47	7.1	1.372771	10.47552	6.2403
751	8/22/02	background	bkg082202	7.5	-1.19	1.98	-0.87	0.59	0.85	0.85	-0.02	1.034698024	11.22	7.82	0.990202	-0.12276	4.27614
753	8/23/02	background	bkg082302	7.5	-1.99	2.86	0.59	0.91	0.72	1.25	1.31	1.546156525	14.61	8.35	1.358713	-2.20968	5.9334
755	8/26/02	background	bkg082602	7.5	-1.92	1.64	1.24	0.49	-1.05	0.65	0.19	0.814002457	13.87	8.08	1.246315	-3.4782	5.38098
768	8/27/02	background	bkg082702	7.5	3.43	2.64	0.11	0.75	-0.45	1	-0.34	1.25	13.96	7.11	1.296302	5.13546	5.70834
770	8/28/02	background	bkg082802	7.5	-0.17	2.11	1.07	0.64	-0.22	0.84	0.85	1.056030303	10.38	8.21	1.026158	2.8644	4.43982
772	8/29/02	background	bkg082902	7.5	1.08	2.39	-0.85	0.68	0.61	0.95	-0.24	1.168289348	16.69	7.02	1.43534	2.10738	6.4449
774	8/30/02	background	bkg083002	7.5	0.02	1.95	-0.4	0.58	1.42	0.83	1.02	1.012570985	14.08	8.36	1.372771	-4.11246	5.97432
786	9/3/02	background	bkg090302	7.5	0.47	1.96	0.13	0.58	0.69	0.79	0.82	0.980051019	11.68	8.65	1.05423	-2.47566	4.48074
788	9/4/02	background	bkg090402	7.5	-0.13	2.23	1.4	0.65	-0.69	0.87	0.71	1.086001842	12.97	8.39	1.246315	1.88232	5.44236
795	9/5/02	background	bkg090502	7.5	1.6	2.04	0.55	0.57	-0.9	0.77	-0.35	0.958018789	17.2	8.11	1.564864	-5.38098	6.71088
813	9/6/02	background	bkg090602	7.5	-0.78	2.27	-0.66	0.66	1.01	0.94	0.35	1.148564321	10.22	7.08	0.880909	0.98208	3.92832
820	9/9/02	background	bkg090902	7.5	-0.01	2.45	0.15	0.69	-0.74	0.95	-0.59	1.174137982	12.84	7.62	1.188486	3.86694	5.2173
822	9/10/02	background	bkg091002	7.5	1.17	2.15	-1	0.6	0.62	0.85	-0.38	1.040432602	11.88	8.39	1.112115	4.95132	4.84902
824	9/11/02	background	bkg091102	7.5	-6.36	1.85	0.71	0.58	-0.55	0.76	0.16	0.956033472	10.35	8.76	0.962133	8.42952	4.25568
843	9/12/02	background	bkg091202	7.5	3.1	1.84	-1.66	0.5	0.99	0.74	-0.67	0.893084542	13.84	8.77	1.372771	-6.2403	5.79018
845	9/13/02	background	bkg091302	7.5	-3.21	2.17	1.01	0.65	-0.58	0.89	0.43	1.102088926	10.93	7.43	1.012126	10.3323	4.46028
848	9/16/02	background	bkg091602	7.5	-2	2.68	1.17	0.82	-1.32	1.11	-0.15	1.380036231	12.5	8.31	1.196328	2.3529	5.2173
850	9/17/02	background	bkg091702	7.5	-5.27	1.89	1.58	0.58	-1.7	0.76	-0.12	0.956033472	15.12	7.92	1.38058	1.57542	5.97432
852	9/18/02	background	bkg091802	7.5	0.18	2.76	-0.96	0.83	1.28	1.18	0.32	1.442671134	11.03	8.47	1.052616	5.34006	4.66488
858	9/19/02	background	bkg091902	7.5	2.87	2.21	-1.37	0.61	1.36	0.87	-0.01	1.062544117	12.25	8.24	1.120045	5.66742	4.72626
880	9/20/02	background	bkg092002	7.5	0.43	3.16	-0.56	0.92	0.63	1.31	0.07	1.600781059	12.61	8.72	1.148085	-9.63666	4.78764
882	9/23/02	background	bkg092302	7.5	3.32	2.41	-0.7	0.65	0.38	0.9	-0.32	1.110180166	12.02	6.8	1.05423	3.64188	4.66488
884	9/24/02	background	bkg092402	7.5	-0.33	2.15	0.33	0.63	-1.8	0.81	-1.47	1.026157883	13.03	9.06	1.170043	1.65726	5.05362
886	9/25/02	background	bkg092502	7.5	0.11	2.01	-0.3	0.57	0.12	0.8	-0.18	0.982293235	12.68	7.25	1.146342	2.00508	5.05362
897	9/26/02	background	bkg092602	7.5	-1.21	1.92	-0.29	0.57	0.19	0.78	-0.1	0.966074531	13.57	9.45	1.284056	6.01524	5.6265
901	9/30/02	background	bkg093002	7.5	1.03	1.74	-0.46	0.5	0.44	0.7	-0.02	0.860232527	11.98	7.94	1.094806	6.01524	4.95132
918	10/1/02	background	bkg100102	7.5	5.47	1.83	0.28	0.51	-1.16	0.65	-0.88	0.826196103	9.56	8.55	0.860523	-7.7748	3.72372

Soil Standard



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Soil Standard

Complete File of Nutranl Samples																	
Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
28	6/6/02	soil standard	soilstd060602	36.9	0.2	3.28	5.82	0.97	3.83	1.23	9.65	1.566460979	14.41	-0.07	1.180042	9.04332	5.0127
30	6/6/02	soil standard	soilstd060602	36.9	9.57	3.8	4.55	1.03	1.11	1.31	5.66	1.666433317	22.44	6.98	2.098976	6.05616	9.24792
31	6/6/02	soil standard	soilstd060602	36.9	2.96	4.52	5.13	1.31	1.85	1.64	6.98	2.098975941	17.82	8.68	1.672633	-5.97432	7.2633
32	6/6/02	soil standard	soilstd060602	36.9	-2.92	3.55	5.46	1.04	3.22	1.31	8.68	1.672632655	5.42	7.95	0.498197	1.04346	2.18922
33	6/6/02	soil standard	soilstd060602	36.9	0.51	1.07	5.53	0.31	2.42	0.39	7.95	0.498196748	13.81	-0.26	1.032279	-3.94878	4.17384
35	6/7/02	soil standard	soilstd060702	36.9	-5.78	3.64	6.97	1.11	3.28	1.41	10.25	1.794491571	40.31	165.24	5.537192	-101.175	25.75914
55	6/10/02	soil standard	soilstd061002	36.9	1.96	2.1	5.19	0.6	2.43	0.75	7.62	0.960468636	12.07	3.98	1.05603	-0.5115	4.37844
73	6/11/02	soil standard	soilstd061102	36.9	-0.16	2.59	5.16	0.76	4.33	1	9.49	1.256025477	17.9	3.51	1.560288	6.40398	6.83364
100	6/12/02	soil standard	soilstd061202	36.9	-1.03	3.48	6.34	1.03	2.97	1.31	9.31	1.666433317	41.96	289.18	5.887147	-74.147	27.2118
108	6/13/02	soil standard	soilstd061302	36.9	5.19	3.34	5.05	0.95	2.46	1.19	7.51	1.522694979	35.34	164.51	4.757226	-60.2138	21.01242
115	6/14/02	soil standard	soilstd061402	36.9	3.53	3.36	4.17	0.95	3.44	1.24	7.61	1.562081944	13.1	5.3	1.126144	-1.023	4.8081
132	6/17/02	soil standard	soilstd061702	36.9	-0.68	3.36	4.49	0.98	3.49	1.29	7.98	1.620030864	14.91	4.08	1.356024	7.3656	5.89248
154	6/18/02	soil standard	soilstd061802	36.9	2.68	3.04	3.77	0.89	3.92	1.13	7.69	1.438401891	140.06	634.08	21.04373	-523.919	100.8064
179	6/19/02	soil standard	soilstd061902	36.9	2.21	2.47	5.02	0.71	3.42	0.92	8.44	1.16211015	17.38	1.96	1.604151	8.16354	6.87456
193	6/20/02	soil standard	soilstd062002	36.9	-1.1	3.86	7.39	1.13	0.9	1.42	8.29	1.814745161	59.63	167.47	7.674406	-26.7003	34.782
205	6/21/02	soil standard	soilstd062102	36.9	1.59	3.46	4.68	0.98	3.38	1.26	8.06	1.596245595	15.39	5.4	1.318218	4.03062	5.7288
224	6/24/02	soil standard	soilstd062402	36.9	-1.4	2.83	5.51	0.83	2.9	1.05	8.41	1.338431918	12.31	3.68	1.072007	6.6495	4.6035
256	6/25/02	soil standard	soilstd062502	36.9	-1.98	4.02	5.63	1.2	3.41	1.51	9.04	1.928756076	21	9.04	1.928756	-4.05108	8.22492
283	6/26/02	soil standard	soilstd062602	36.9	-4.1	4.2	5.22	1.26	2.43	1.61	7.65	2.044431461	13.82	13.91	1.485295	2.7621	6.69042
296	6/27/02	soil standard	soilstd062702	36.9	-6.66	3.53	6.82	1.06	1.92	1.34	8.74	1.708566651	55.18	160.53	7.244929	22.79244	33.02244
313	6/28/02	soil standard	soilstd062802	36.9	-1.3	3.14	5.89	0.95	2.58	1.21	8.47	1.538375767	9.67	6.37	0.942019	10.08678	4.05108
331	7/1/02	soil standard	soilstd070102	36.9	0.2	3.6	5.36	1.05	4.15	1.35	9.51	1.710263138	11.98	3.54	0.992018	-1.26852	4.17384
357	7/2/02	soil standard	soilstd070202	36.9	2.78	3.01	4.37	0.86	3.07	1.12	7.44	1.412090649	12.8	6.23	1.184061	5.91294	5.15592
373	7/3/02	soil standard	soilstd070302	36.9	3.22	4.32	6.23	1.24	1.27	1.56	7.5	1.992786993	14.75	13.59	1.436802	11.70312	6.48582
387	7/8/02	soil standard	soilstd070802	36.9	0.55	2.6	3.18	0.78	4.39	1.01	7.57	1.276126953	73.09	252.01	9.714119	-50.2088	41.20644
425	7/9/02	soil standard	soilstd070902	36.9	2.35	2.81	4.41	0.81	3.18	1.04	7.59	1.318218495	12.16	6.58	1.168247	-6.4449	4.93086
442	7/10/02	soil standard	soilstd071002	36.9	-1.99	2.79	4.3	0.82	3.66	1.07	7.96	1.348072698	21.18	15.74	2.164625	-15.2222	9.1047
463	7/11/02	soil standard	soilstd071102	36.9	-3.77	3.6	4.64	1.08	4.16	1.4	8.8	1.768162888	12.08	6.78	1.082312	2.84394	4.78764
486	7/12/02	soil standard	soilstd071202	36.9	-0.65	3.2	4.69	0.93	2.55	1.18	7.24	1.502431363	14.81	13.26	1.393126	-4.74672	6.17892
518	7/15/02	soil standard	soilstd071502	36.9	0.42	3.77	5.39	1.08	1.4	1.34	6.79	1.721046193	11.43	0.05	0.974166	-0.73656	3.90786
520	7/15/02	soil standard	soilstd(2)071502	36.9	4.45	3.78	5.98	1.07	3.06	1.36	9.04	1.730462366	18.08	15.56	1.727339	8.9001	7.85664
524	7/16/02	soil standard	soilstd071602	36.9	6.37	3.03	4.45	0.85	1.98	1.07	6.43	1.366528448	22.71	7.1	2.084035	-6.93594	8.55228
529	7/16/02	soil standard	soilstd(2)071602	36.9	3.01	3.82	4.43	1.12	3.83	1.44	8.26	1.82428068	16.79	7.25	1.466492	-4.092	6.4449
534	7/17/02	soil standard	soilstd071702	36.9	0.91	2.99	5.65	0.85	2.91	1.07	8.56	1.366528448	21.78	8.89	2.002324	14.54706	9.04332
544	7/18/02	soil standard	soilstd071802	36.9	4.14	3.78	4.95	1.07	4.01	1.39	8.96	1.754137965	10.62	11.41	1.102588	-1.39128	4.86948
554	7/19/02	soil standard	soilstd071902	36.9	-0.49	2.95	6.68	0.86	1.77	1.07	8.45	1.372777092	29.46	117.64	3.890823	-61.5232	18.55722
558	7/22/02	soil standard	soilstd072202	36.9	-0.74	1.92	5.29	0.56	2.66	0.71	7.95	0.904267659	10.75	2.35	0.894036	3.15084	3.74418
588	7/23/02	soil standard	soilstd072302	36.9	2.33	2.62	5.03	0.75	2.33	0.95	7.36	1.210371844	10.79	1.1	0.864002	-0.57288	3.66234
606	7/24/02	soil standard	soilstd072402	36.9	3.69	2.53	4.45	0.72	3.42	0.93	7.87	1.176137747	26.55	15.13	2.772183	13.74912	12.84888
609	7/25/02	soil standard	soilstd072502	36.9	-0.2	2.8	5.21	0.83	3.45	1.05	8.66	1.338431918	16.67	1.05	1.298499	-9.53436	4.76718
611	7/26/02	soil standard	soilstd072602	36.9	6.16	2.54	3.87	0.71	3.74	0.92	7.61	1.16211015	11.52	1.65	0.922009	-8.75688	3.60096
616	7/29/02	soil standard	soilstd072902	36.9	5.02	2.41	4.08	0.69	3.78	0.88	7.86	1.118257573	10.1	2	0.82801	5.3196	3.62142
630	7/30/02	soil standard	soilstd073002	36.9	1.83	2.29	5.26	0.65	1.48	0.82	6.74	1.046374694	16.97	7.4	1.572927	8.0817	6.40398
633	7/31/02	soil standard	soilstd073102	36.9	3.11	2.29	6.22	0.65	2.17	0.81	8.39	1.038556691	39.36	37.57	4.615886	22.97658	22.9152
639	8/1/02	soil standard	soilstd080102	36.9	3.54	2.72	4.54	0.78	3.31	0.99	7.85	1.260357092	13.98	1.22	1.202082	8.47044	5.115
652	8/2/02	soil standard	soilstd080202	36.9	1.2	2.95	4.47	0.85	3.08	1.09	7.55	1.382244551	11.72	4.41	1.066068	7.2633	4.54212
661	8/6/02	soil standard	soilstd080602	36.9	1.64	2.45	4.73	0.72	4.35	0.91	9.08	1.160387866	14.04	0.71	1.1	0.79794	4.74672
665	8/7/02	soil standard	soilstd080702	36.9	1.13	1.72	4.86	0.5	2.24	0.62	7.1	0.79649231	10	2.61	0.85	-2.33244	3.53958
681	8/8/02	soil standard	soilstd080802	36.9	0.23	2.49	5.05	0.73	3.25	0.93	8.3	1.182285921	9.15	2.99	0.758024	5.70834	3.25314

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Complete File of Nutranl Samples														
Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty		
703	8/9/02	soil standard	soilstd080902	36.9	0.95	2.74	5.52	0.81	3.2	1.01	8.72	1.294681428	12.64	1.32 1.026499 -0.49104 4.07154
705	8/12/02	soil standard	soilstd081202	36.9	1.17	3.21	4.51	0.93	2.52	1.19	7.03	1.510297984	8.29	-0.18 0.672012 1.67772 2.80302
707	8/13/02	soil standard	soilstd081302	36.9	0.58	2.45	4.92	0.73	3.76	0.93	8.68	1.182285921	46.5	178.26 6.43199 -53.8507 30.30126
711	8/14/02	soil standard	soilstd081402	36.9	0.68	2.56	4.89	0.75	2.24	0.94	7.13	1.202538981	8.6	0.39 0.64405 4.27614 2.7621
715	8/15/02	soil standard	soilstd081502	36.9	1.52	2.13	5.39	0.62	2.07	0.78	7.46	0.996393497	17.25	3.26 1.382208 1.55496 5.6265
718	8/16/02	soil standard	soilstd081602	36.9	3.69	2.67	5.2	0.76	3.05	0.96	8.25	1.224418229	19.21	33.74 2.144621 -18.9869 9.59574
730	8/19/02	soil standard	soilstd081902	36.9	-3.96	2.74	7.17	0.81	0.65	0.98	7.82	1.271416533	15.05	1.29 1.251 0.1023 5.05362
732	8/20/02	soil standard	soilstd082002	36.9	6.11	2.99	4.83	0.85	3.08	1.06	7.91	1.358712626	12.78	1.11 1.012126 2.2506 4.35798
740	8/21/02	soil standard	soilstd082102	36.9	5.12	3.05	5.13	0.86	1.97	1.07	7.1	1.37277092	14.44	1.96 1.128007 -3.94878 4.72626
752	8/22/02	soil standard	soilstd082202	36.9	-0.06	2.09	4.13	0.61	3.69	0.78	7.82	0.990202	17.25	1.31 1.546157 -4.07154 5.85156
754	8/23/02	soil standard	soilstd082302	36.9	-1.08	2.9	6.42	0.85	1.93	1.06	8.35	1.358712626	10.18	0.19 0.814002 -3.92832 3.35544
756	8/26/02	soil standard	soilstd082602	36.9	-1.7	2.63	5.12	0.77	2.96	0.98	8.08	1.246314567	410.83	1774.85 64.64936 -1669.88 309.8462
769	8/27/02	soil standard	soilstd082702	36.9	2.51	2.79	4.8	0.8	2.31	1.02	7.11	1.296302434	12.33	0.85 1.05603 -0.34782 4.31706
771	8/28/02	soil standard	soilstd082802	36.9	1.4	2.17	5.09	0.63	3.12	0.81	8.21	1.026157883	16.29	-0.24 1.168289 2.20968 4.88994
773	8/29/02	soil standard	soilstd082902	36.9	1.03	3.15	5.99	0.91	1.03	1.11	7.02	1.435339681	11.16	1.02 1.012571 0.04092 3.9897
775	8/30/02	soil standard	soilstd083002	36.9	-2.01	2.92	6.37	0.86	1.99	1.07	8.36	1.37277092	14.38	1.48 1.194027 -7.28376 4.74672
787	9/3/02	soil standard	soilstd090302	36.9	-1.21	2.19	4.97	0.65	3.68	0.83	8.65	1.054229577	11.62	0.71 1.086002 -0.26598 4.56258
789	9/4/02	soil standard	soilstd090402	36.9	0.92	2.66	5.08	0.77	3.31	0.98	8.39	1.246314567	46.27	210.33 6.942622 -83.3745 33.57486
796	9/5/02	soil standard	soilstd090502	36.9	-2.63	3.28	5.06	0.98	3.05	1.22	8.11	1.564864211	13.11	2.57 1.092016 4.23522 4.74672
814	9/6/02	soil standard	soilstd090602	36.9	0.48	1.92	5.99	0.56	1.09	0.68	7.08	0.880908622	13.64	1.79 1.142016 8.65458 4.95132
821	9/9/02	soil standard	soilstd090902	36.9	1.89	2.55	5.64	0.74	1.98	0.93	7.62	1.188486432	13.38	-0.38 1.040433 2.39382 4.3989
823	9/10/02	soil standard	soilstd091002	36.9	2.42	2.37	4.32	0.68	4.07	0.88	8.39	1.112115102	12.38	0.16 0.956033 -13.0126 3.7851
825	9/11/02	soil standard	soilstd091102	36.9	4.12	2.08	5.29	0.59	3.47	0.76	8.76	0.962133047	11.73	2.09 0.922009 -2.51658 3.84648
844	9/12/02	soil standard	soilstd091202	36.9	-3.05	2.83	6.26	0.86	2.51	1.07	8.77	1.37277092	13.62	0.43 1.102089 -6.56766 4.43982
846	9/13/02	soil standard	soilstd091302	36.9	5.05	2.18	3.72	0.62	3.71	0.8	7.43	1.012126474	27.27	69.37 3.474162 -7.07916 16.55214
849	9/16/02	soil standard	soilstd091602	36.9	1.15	2.55	5.22	0.74	3.09	0.94	8.31	1.196327714	12.45	-0.12 0.956033 -10.7824 3.86694
851	9/17/02	soil standard	soilstd091702	36.9	0.77	2.92	5.57	0.86	2.35	1.08	7.92	1.380579588	16.67	0.32 1.442671 0.36828 5.64696
853	9/18/02	soil standard	soilstd091802	36.9	2.61	2.28	5.7	0.66	2.77	0.82	8.47	1.052615789	21.17	11.19 2.331738 -1.96416 10.51644
859	9/19/02	soil standard	soilstd091902	36.9	2.77	2.31	3	0.68	5.24	0.89	8.24	1.120044642	18.59	8.72 1.660271 -16.2657 6.73134
881	9/20/02	soil standard	soilstd092002	36.9	-4.71	2.34	5.21	0.7	3.51	0.91	8.72	1.148085363	14.57	-0.32 1.11018 6.79272 4.93086
883	9/23/02	soil standard	soilstd092302	36.9	1.78	2.28	4.64	0.65	2.16	0.83	6.8	1.054229577	14.5	-1.47 1.026158 -0.67518 4.3989
885	9/24/02	soil standard	soilstd092402	36.9	0.81	2.47	4.58	0.71	4.48	0.93	9.06	1.170042734	12.98	-0.18 0.982293 0.22506 4.11246
887	9/25/02	soil standard	soilstd092502	36.9	0.98	2.47	5.17	0.71	2.08	0.9	7.25	1.146342008	15.43	2.01 1.226418 0.96162 5.09454
898	9/26/02	soil standard	soilstd092602	36.9	2.94	2.75	5.21	0.78	4.24	1.02	9.45	1.284056074	23.99	28.52 2.527449 2.57796 11.5599
902	9/30/02	soil standard	soilstd093002	36.9	2.94	2.42	6.63	0.69	1.31	0.85	7.94	1.094805919	27.2	35.02 3.14587 11.78496 14.79258
919	10/1/02	soil standard	soilstd100102	36.9	-3.8	1.82	6.24	0.54	2.31	0.67	8.55	0.860523097	10.47	0.19 0.786003 0.16368 3.25314
933	10/3/02	soil standard	soilstd100302	36.9	-0.97	2.69	5.44	0.79	3.44	1	8.88	1.27440182		

EPA Special



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Sample ID	Sample Date	Sample Group	Description	Weight		U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
38	6/7/02	EPA Special	Batch #1 Sample #1	21.7	-24.81	8.95	86.72	2.57	69.17	3.27	155.89	4.159062394	43.67	161	5.894064811	-34.6183	26.47524	
109	6/13/02	EPA Special	Batch #1 Sample #1	21.7	-29.43	10.27	93.61	2.94	70.9	3.74	164.51	4.757226082	47.53	158.6	6.378220755	-41.9839	28.82814	
194	6/20/02	EPA Special	Batch #1 Sample #1	21.7	-13.05	17	102.23	4.81	65.24	5.98	167.47	7.674405514	52.45	157.23	6.804594036	-11.8259	31.11966	
297	6/27/02	EPA Special	Batch #1 Sample #1	21.7	11.14	16.14	91.94	4.51	68.59	5.67	160.53	7.244929261	43.23	160.66	5.761267222	-62.9554	25.94328	
389	7/8/02	EPA Special	Batch #1 Sample #1	21.7	-10.56	11.05	95.67	3.13	69.73	3.95	165.4	5.039781741	32.26	146.83	4.358864531	-54.1167	19.55976	
39	6/7/02	EPA Special	Batch #1 Sample #2	20.3	-16.92	12.94	96.26	3.66	64.74	4.62	161	5.894064811	37.28	177.99	5.238091255	-36.6848	23.4267	
110	6/13/02	EPA Special	Batch #1 Sample #2	20.3	-20.52	14.09	98.91	4.01	59.69	4.96	158.6	6.378220755	50.77	178.28	6.74985185	-36.8075	30.60816	
195	6/20/02	EPA Special	Batch #1 Sample #2	20.3	-5.78	15.21	98.16	4.28	59.07	5.29	157.23	6.804594036	52.33	162.68	7.181002715	-47.4058	32.49048	
298	6/27/02	EPA Special	Batch #1 Sample #2	20.3	-30.77	12.68	102.23	3.61	58.43	4.49	160.66	5.761267222	61.58	176.04	8.20698483	-14.0969	37.3395	
390	7/8/02	EPA Special	Batch #1 Sample #2	20.3	-26.45	9.56	92.25	2.74	54.58	3.39	146.83	4.358864531	33.65	177.37	4.468131601	-54.8123	20.00988	
40	6/7/02	EPA Special	Batch #1 Sample #3	21.6	-17.93	11.45	108.06	3.26	69.93	4.1	177.99	5.238091255	26.08	103.39	3.379600568	-29.2578	15.07902	
111	6/13/02	EPA Special	Batch #1 Sample #3	21.6	-17.99	14.96	108.92	4.23	69.36	5.26	178.28	6.74985185	31.24	107.36	4.246374925	-17.6161	19.21194	
196	6/20/02	EPA Special	Batch #1 Sample #3	21.6	-23.17	15.88	104.41	4.52	58.27	5.58	162.68	7.181002715	39.41	108.06	5.30835191	-7.09962	24.06096	
299	6/27/02	EPA Special	Batch #1 Sample #3	21.6	-6.89	18.25	109.36	5.15	66.68	6.39	176.04	8.20698483	30.66	107.48	3.884044284	-22.4651	17.43192	
391	7/8/02	EPA Special	Batch #1 Sample #3	21.6	-26.79	9.78	108.55	2.79	68.82	3.49	177.37	4.468131601	26.84	104.95	3.46394284	-27.1095	15.52914	
41	6/7/02	EPA Special	Batch #1 Sample #4	21.9	-14.3	7.37	64.44	2.11	38.95	2.64	103.39	3.379600568	35.72	190.28	4.882007784	-79.9372	21.64668	
112	6/13/02	EPA Special	Batch #1 Sample #4	21.9	-8.61	9.39	68.91	2.66	38.45	3.31	107.36	4.246374925	49.99	194.47	7.046616209	-34.2705	31.5084	
197	6/20/02	EPA Special	Batch #1 Sample #4	21.9	-3.47	11.76	64.16	3.31	43.9	4.15	108.06	5.30835191	74.59	206.34	10.14037968	-57.6358	45.5235	
300	6/27/02	EPA Special	Batch #1 Sample #4	21.9	-10.98	8.52	65.65	2.43	41.83	3.03	107.48	3.884044284	57.7	209.92	8.099209838	-14.5471	36.7257	
392	7/8/02	EPA Special	Batch #1 Sample #4	21.9	-13.25	7.59	64.35	2.17	40.6	2.7	104.95	3.46394284	56.76	225.84	7.474570222	-68.2546	33.32934	
42	6/7/02	EPA Special	Batch #1 Sample #5	21.5	-39.07	10.58	116.5	3.04	73.78	3.82	190.28	4.882007784	10.61	6.49	0.992018145	-3.15084	4.07154	
113	6/13/02	EPA Special	Batch #1 Sample #5	21.5	-16.75	15.4	114.67	4.38	79.8	5.52	194.47	7.046616209	11.74	-0.09	0.908019824	-1.49358	3.64188	
198	6/20/02	EPA Special	Batch #1 Sample #5	21.5	-28.17	22.25	119.51	6.32	86.83	7.93	206.34	10.14037968	18.68	26.07	2.525331661	-14.1788	11.1507	
301	6/27/02	EPA Special	Batch #1 Sample #5	21.5	-7.11	17.95	123.5	5.04	86.42	6.34	209.92	8.099209838	22.63	40.83	2.81625638	-5.0127	12.25554	
393	7/8/02	EPA Special	Batch #1 Sample #5	21.5	-33.36	16.29	131.83	4.64	94.01	5.86	225.84	7.474570222	14.71	3.99	1.31605471	-0.36828	5.4219	
43	6/7/02	EPA Special	Batch #2 Sample #1	27.8	-1.54	1.99	2.8	0.6	3.69	0.79	6.49	0.992018145	13.12	7.18	1.194738465	10.72104	5.40144	
116	6/14/02	EPA Special	Batch #2 Sample #1	27.8	-0.5	2.35	3.66	0.69	1.64	0.89	5.3	1.126143863	9.8	7.41	0.896437393	3.70326	3.92832	
206	6/21/02	EPA Special	Batch #2 Sample #1	27.8	1.97	2.8	2.92	0.81	2.48	1.04	5.4	1.318218495	12.81	7.81	1.168246549	-10.6392	4.88994	
314	6/28/02	EPA Special	Batch #2 Sample #1	27.8	4.93	1.98	2.95	0.57	3.42	0.75	6.37	0.942019108	9.1	8.26	0.882383137	-5.07408	3.80556	
426	7/9/02	EPA Special	Batch #2 Sample #1	27.8	-3.15	2.41	4.43	0.72	2.15	0.92	6.58	1.168246549	12.56	8.27	1.326122166	3.49866	5.6265	
44	6/7/02	EPA Special	Batch #2 Sample #2	27.8	5.24	2.64	5.62	0.75	1.56	0.93	7.18	1.194738465	10.65	5.76	0.934077085	-0.6138	3.94878	

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Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
117	6/14/02	EPA Special	Batch #2 Sample #2 07D	27.8	1.81	1.92	4.81	0.56	2.6	0.7	7.41	0.896437393	12.44	5.52	1.09808925	1.1253	4.72626
207	6/21/02	EPA Special	Batch #2 Sample #2 14D	27.8	-5.2	2.39	5.03	0.72	2.78	0.92	7.81	1.168246549	9.99	6.36	0.884081444	-6.11754	3.6828
315	6/28/02	EPA Special	Batch #2 Sample #2 21D	27.8	-2.48	1.86	6.09	0.55	2.17	0.69	8.26	0.882383137	11.03	5.49	1.010445446	2.82348	4.43982
427	7/9/02	EPA Special	Batch #2 Sample #2 32D	27.8	1.71	2.75	4.52	0.81	3.75	1.05	8.27	1.326122166	10.47	5.54	0.886002257	0.5115	3.74418
45	6/7/02	EPA Special	Batch #2 Sample #3	27.2	-0.3	1.93	3.23	0.57	2.53	0.74	5.76	0.934077085	13.61	6.48	1.236001618	3.39636	5.19684
118	6/14/02	EPA Special	Batch #2 Sample #3 07D	27.2	0.55	2.31	3.16	0.67	2.36	0.87	5.52	1.09808925	12.87	7.14	1.152085066	2.7621	4.78764
208	6/21/02	EPA Special	Batch #2 Sample #3 14D	27.2	-2.99	1.8	3.47	0.54	2.89	0.7	6.36	0.884081444	13.71	5.71	1.322006051	-0.36828	5.56512
316	6/28/02	EPA Special	Batch #2 Sample #3 21D	27.2	1.38	2.17	4.15	0.63	1.34	0.79	5.49	1.010445446	8.99	5.72	0.770064932	4.66488	3.3759
428	7/9/02	EPA Special	Batch #2 Sample #3 32D	27.2	0.25	1.83	2.15	0.53	3.39	0.71	5.54	0.886002257	14.44	6.41	1.222006547	9.49344	5.19684
46	6/7/02	EPA Special	Batch #2 Sample #4	26.7	1.66	2.54	2.59	0.74	3.89	0.99	6.48	1.236001618	10.02	6.86	0.91214034	2.18922	3.92832
119	6/14/02	EPA Special	Batch #2 Sample #4 07D	26.7	1.35	2.34	1.69	0.68	5.45	0.93	7.14	1.152085066	12.06	5.84	1.056030303	2.20968	4.56258
209	6/21/02	EPA Special	Batch #2 Sample #4 14D	26.7	-0.18	2.72	2.87	0.79	2.84	1.06	5.71	1.322006051	9.17	6.29	0.892020179	7.42698	3.80556
317	6/28/02	EPA Special	Batch #2 Sample #4 21D	26.7	2.28	1.65	3.33	0.47	2.39	0.61	5.72	0.770064932	12.73	6.48	1.12200713	6.93594	4.74672
429	7/9/02	EPA Special	Batch #2 Sample #4 32D	26.7	4.64	2.54	1.57	0.73	4.84	0.98	6.41	1.222006547	10.47	6.73	0.956033472	-2.78256	3.9897
47	6/7/02	EPA Special	Batch #2 Sample #5	28.5	1.07	1.92	3.41	0.56	3.45	0.72	6.86	0.91214034	10.75	10.53	1	-1.98462	4.17384
120	6/14/02	EPA Special	Batch #2 Sample #5 07D	28.5	1.08	2.23	3.24	0.64	2.6	0.84	5.84	1.056030303	13.54	3.69	1.12200713	-6.48582	4.5012
210	6/21/02	EPA Special	Batch #2 Sample #5 14D	28.5	3.63	1.86	3.35	0.54	2.94	0.71	6.29	0.892020179	14.76	2.83	1.24016128	3.25314	5.36052
318	6/28/02	EPA Special	Batch #2 Sample #5 21D	28.5	3.39	2.32	1.68	0.67	4.8	0.9	6.48	1.12200713	13.76	2.57	1.196327714	-8.51136	4.88994
430	7/9/02	EPA Special	Batch #2 Sample #5 32D	28.5	-1.36	1.95	3.64	0.58	3.09	0.76	6.73	0.956033472	10.08	3.12	0.858020979	0.6138	3.62142
49	6/7/02	EPA Special	Batch #3 Sample #1	28.3	-2.66	1.95	1.36	0.6	2.68	0.79	4.04	0.992018145	12.49	2.88	1.170042734	2.2506	4.88994
121	6/14/02	EPA Special	Batch #3 Sample #1 07D	28.3	-3.17	2.2	1.06	0.67	2.63	0.9	3.69	1.12200713	14.27	3.5	1.206026534	-2.02554	4.95132
211	6/21/02	EPA Special	Batch #3 Sample #1 14D	28.3	1.59	2.62	2.38	0.76	0.45	0.98	2.83	1.24016128	13.92	2.98	1.208014901	2.78256	5.15592
319	6/28/02	EPA Special	Batch #3 Sample #1 21D	20	-4.16	2.39	2.95	0.74	-0.38	0.94	2.57	1.196327714	11.31	3.23	0.914002188	-1.78002	3.7851
431	7/9/02	EPA Special	Batch #3 Sample #1 32D	28.3	0.3	1.77	1.02	0.51	2.1	0.69	3.12	0.858020979	11.59	2.65	0.980051019	7.28376	4.27614
50	6/7/02	EPA Special	Batch #3 Sample #2	28	1.1	2.39	1.79	0.71	1.09	0.93	2.88	1.170042734	10.85	2.63	0.878009112	1.5345	3.74418
122	6/14/02	EPA Special	Batch #3 Sample #2 07D	28	-0.99	2.42	2.37	0.73	1.13	0.96	3.5	1.206026534	9.95	3.27	0.842021377	0.14322	3.43728
212	6/21/02	EPA Special	Batch #3 Sample #2 14D	28	1.36	2.52	1.49	0.72	1.49	0.97	2.98	1.208014901	10.99	3.33	0.920054346	-0.77748	3.8874
320	6/28/02	EPA Special	Batch #3 Sample #2 21D	28	-0.87	1.85	1.03	0.55	2.2	0.73	3.23	0.914002188	10.79	4.4	1	-1.00254	4.13292
432	7/9/02	EPA Special	Batch #3 Sample #2 32D	28	3.56	2.09	1.18	0.58	1.47	0.79	2.65	0.980051019	9.14	3.89	0.814002457	-3.96924	3.3759
51	6/7/02	EPA Special	Batch #3 Sample #3	27	0.75	1.83	1.47	0.53	1.16	0.7	2.63	0.878009112	11.92	2.07	0.970051545	1.45266	4.092

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123	6/14/02	EPA Special	Batch #3 Sample #3 07D	27	0.07	1.68	1.26	0.51	2.01	0.67	3.27	0.842021377	9.13	3.36	0.814002457	10.37322	3.51912
213	6/21/02	EPA Special	Batch #3 Sample #3 14D	27	-0.38	1.9	2.2	0.56	1.13	0.73	3.33	0.920054346	13.47	2.81	1.128007092	6.50628	4.76718
321	6/28/02	EPA Special	Batch #3 Sample #3 21D	27	-0.49	2.02	1.78	0.6	2.62	0.8	4.4	1	13.93	1.6	1.114001795	15.8565	5.0127
433	7/9/02	EPA Special	Batch #3 Sample #3 32D	27	-1.94	1.65	2.06	0.49	1.83	0.65	3.89	0.814002457	8.3	4.06	0.756042327	-7.65204	3.10992
52	6/7/02	EPA Special	Batch #3 Sample #4	28.6	0.71	2	1.39	0.59	0.68	0.77	2.07	0.970051545	8.85	2.53	0.702139587	7.161	3.02808
124	6/14/02	EPA Special	Batch #3 Sample #4 07D	28.6	5.07	1.72	1.2	0.49	2.16	0.65	3.36	0.814002457	10.33	3.33	0.858020979	3.84648	3.60096
214	6/21/02	EPA Special	Batch #3 Sample #4 14D	28.6	3.18	2.33	0.37	0.68	2.44	0.9	2.81	1.128007092	8.98	3.45	0.8	3.82602	3.41682
322	6/28/02	EPA Special	Batch #3 Sample #4 21D	28.6	7.75	2.45	0.82	0.67	0.78	0.89	1.6	1.114001795	12.75	4.54	1.152085066	-11.7645	4.54212
434	7/9/02	EPA Special	Batch #3 Sample #4 32D	28.6	-3.74	1.52	2.69	0.46	1.37	0.6	4.06	0.756042327	12.42	3.12	1.084066419	0.77748	4.58304
53	6/7/02	EPA Special	Batch #3 Sample #5	28.9	3.5	1.48	-0.03	0.41	2.56	0.57	2.53	0.702139587	11.24	0.76	0.966074531	-0.06138	3.86694
125	6/14/02	EPA Special	Batch #3 Sample #5 07D	28.9	1.88	1.76	1.23	0.51	2.1	0.69	3.33	0.858020979	14.27	5.16	1.27800626	6.73134	5.58558
215	6/21/02	EPA Special	Batch #3 Sample #5 14D	28.9	1.87	1.67	1.53	0.48	1.92	0.64	3.45	0.8	12.64	2.87	1.1	1.2276	4.58304
323	6/28/02	EPA Special	Batch #3 Sample #5 21D	28.9	-5.75	2.22	1.49	0.68	3.05	0.93	4.54	1.152085066	15.76	6.24	1.538083223	0.98208	6.30168
435	7/9/02	EPA Special	Batch #3 Sample #5 32D	28.9	0.38	2.24	2.4	0.66	0.72	0.86	3.12	1.084066419	11.77	4.88	1.068269629	-4.9104	4.58304
56	6/10/02	EPA Special	Batch #4 Sample #1	27	-0.25	2.14	1.89	0.64	2.09	0.84	3.98	1.056030303	13.8	2.97	1.192015101	5.25822	5.15592
134	6/17/02	EPA Special	Batch #4 Sample #1 07D	27	4.02	2.09	1.8	0.6	1.38	0.78	3.18	0.984073168	11.39	3.1	0.942019108	-0.69564	3.9897
225	6/24/02	EPA Special	Batch #4 Sample #1 14D	27	3.25	2.25	1.28	0.64	2.4	0.86	3.68	1.072007463	10.89	3.69	0.922008677	9.57528	3.96924
332	7/1/02	EPA Special	Batch #4 Sample #1 21D	27	-0.62	2.04	1.7	0.6	1.84	0.79	3.54	0.992018145	11.3	3.24	1.020049018	8.85918	4.56258
444	7/10/02	EPA Special	Batch #4 Sample #1 30D	27	0.38	2.5	2.11	0.74	1.76	0.98	3.87	1.228006515	10.93	3.72	0.94810337	-2.39382	3.9897
57	6/10/02	EPA Special	Batch #4 Sample #2	28.9	2.57	2.52	1.89	0.72	1.08	0.95	2.97	1.192015101	12.76	3.58	1.158015544	5.34006	4.86948
226	6/24/02	EPA Special	Batch #4 Sample #2 14D	28.9	4.68	1.94	1.14	0.55	2.55	0.74	3.69	0.922008677	10.6	3.72	0.894035793	-0.12276	3.7851
333	7/1/02	EPA Special	Batch #4 Sample #2 21D	28.9	4.33	2.23	2.25	0.62	0.99	0.81	3.24	1.020049018	10.07	2.86	0.834086326	4.78764	3.66234
445	7/10/02	EPA Special	Batch #4 Sample #2 30D	28.9	-1.17	1.95	2.11	0.58	1.61	0.75	3.72	0.94810337	12.85	3.41	1.020049018	0.45012	4.31706
135	6/17/02	EPA Special	Batch #4 Sample #2	28.9	-0.34	1.95	1.54	0.57	1.56	0.75	3.1	0.942019108	12.96	3.38	1.114001795	6.73134	4.82856
58	6/10/02	EPA Special	Batch #4 Sample #3	29.2	2.61	2.38	1.31	0.69	2.27	0.93	3.58	1.158015544	10.84	2.91	0.986002028	1.10484	4.1943
136	6/17/02	EPA Special	Batch #4 Sample #3 07D	29.2	3.29	2.36	1.57	0.67	1.81	0.89	3.38	1.114001795	11.51	3.91	1.036001931	6.97686	4.37844
227	6/24/02	EPA Special	Batch #4 Sample #3 14D	29.2	-0.06	1.85	1.33	0.53	2.39	0.72	3.72	0.894035793	11.73	3.41	0.966074531	-1.88232	3.94878
334	7/1/02	EPA Special	Batch #4 Sample #3 21D	29.2	2.34	1.79	1.73	0.51	1.13	0.66	2.86	0.834086326	12.38	2.53	0.964002075	8.32722	4.2966
446	7/10/02	EPA Special	Batch #4 Sample #3 30D	29.2	0.22	2.11	1.39	0.62	2.02	0.81	3.41	1.020049018	11.68	3.32	0.960208311	0.98208	4.07154
59	6/10/02	EPA Special	Batch #4 Sample #4	27.7	0.54	2.05	1.65	0.59	1.26	0.79	2.91	0.986002028	10.38	2.95	0.864002315	6.07662	3.74418
137	6/17/02	EPA Special	Batch #4 Sample #4 07D	27.7	3.41	2.14	1.33	0.62	2.58	0.83	3.91	1.036001931	9.48	3.79	0.838152731	3.43728	3.53958

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Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
228	6/24/02	EPA Special	Batch #4 Sample #4 14D	27.7	-0.92	1.93	1.15	0.57	2.26	0.78	3.41	0.966074531	8.13	4.26	0.72201108	6.30168	3.04854
335	7/1/02	EPA Special	Batch #4 Sample #4 21D	27.7	4.07	2.1	0.95	0.58	1.58	0.77	2.53	0.964002075	15.11	4.53	1.322006051	0.34782	5.40144
447	7/10/02	EPA Special	Batch #4 Sample #4 30D	27.7	0.48	1.99	1.14	0.56	2.18	0.78	3.32	0.960208311	15	3.66	1.340149245	3.15084	5.76972
60	6/10/02	EPA Special	Batch #4 Sample #5 Batch #4 Sample #5 07D	29.6	2.97	1.83	1.54	0.52	1.41	0.69	2.95	0.864002315	11.14	4.51	0.984073168	8.85918	4.2966
138	6/17/02	EPA Special	Batch #4 Sample #5 14D	29.6	1.68	1.73	1.39	0.49	2.4	0.68	3.79	0.838152731	10.17	4.84	0.980051019	7.7748	4.21476
229	6/24/02	EPA Special	Batch #4 Sample #5 21D	29.6	3.08	1.49	1.19	0.43	3.07	0.58	4.26	0.72201108	11.9	5.06	1.048093507	8.61366	4.58304
336	7/1/02	EPA Special	Batch #4 Sample #5 30D	29.6	0.17	2.64	0.62	0.79	3.91	1.06	4.53	1.322006051	13.07	5.23	1.164001718	5.85156	5.05362
448	7/10/02	EPA Special	Batch #5 Sample #1 Batch #5 Sample #1 07D	23.5	4.33	2.1	2.25	0.6	2.26	0.78	4.51	0.984073168	14.91	6.05	1.436001393	-0.7161	6.01524
61	6/10/02	EPA Special	Batch #5 Sample #1 14D	23.5	3.8	2.06	1.71	0.58	3.13	0.79	4.84	0.980051019	11.59	4.5	0.970051545	-1.55496	4.11246
139	6/17/02	EPA Special	Batch #5 Sample #1 21D	23.5	4.21	2.24	2.87	0.64	2.19	0.83	5.06	1.048093507	11.57	6.26	1.056030303	-1.45266	4.43982
230	6/24/02	EPA Special	Batch #5 Sample #1 30D	23.5	2.86	2.47	2.14	0.7	3.09	0.93	5.23	1.164001718	9.09	5.46	0.840238062	6.58812	3.66234
337	7/1/02	EPA Special	Batch #5 Sample #1 Batch #5 Sample #2 Batch #5 Sample #2 07D	23.5	0.61	2.13	2.33	0.61	3.25	0.82	5.58	1.022007828	14.61	6.79	1.356023599	-2.53704	5.58558
449	7/10/02	EPA Special	Batch #5 Sample #2 Batch #5 Sample #2 07D	22.9	-0.35	2.94	2.91	0.86	3.14	1.15	6.05	1.436001393	11.54	5.22	1.0020978	9.53436	4.33752
62	6/10/02	EPA Special	Batch #5 Sample #2 14D	22.9	-0.76	2.01	2.56	0.59	1.94	0.77	4.5	0.970051545	12.04	4.19	1.074476617	7.161	4.8081
140	6/17/02	EPA Special	Batch #5 Sample #2 21D	22.9	-0.71	2.17	2.57	0.64	3.69	0.84	6.26	1.056030303	10.82	4.42	0.914002188	-1.37082	3.84648
231	6/24/02	EPA Special	Batch #5 Sample #2 30D	22.9	3.22	1.79	3.27	0.52	2.19	0.66	5.46	0.840238062	12.87	4.79	1.05	9.5139	4.62396
338	7/1/02	EPA Special	Batch #5 Sample #2 Batch #5 Sample #3 Batch #5 Sample #3 07D	22.9	-1.24	2.73	2.66	0.82	4.13	1.08	6.79	1.356023599	10.68	4.84	0.910494371	-8.2863	3.82602
450	7/10/02	EPA Special	Batch #5 Sample #3 Batch #5 Sample #3 07D	21.2	4.66	2.12	1.4	0.59	3.82	0.81	5.22	1.0020978	9.7	4.33	0.878009112	0.6138	3.74418
63	6/10/02	EPA Special	Batch #5 Sample #3 14D	21.2	3.5	2.35	3.65	0.67	0.54	0.84	4.19	1.074476617	11.96	3.39	0.976165969	2.046	4.23522
141	6/17/02	EPA Special	Batch #5 Sample #3 21D	21.2	-0.67	1.88	2.52	0.55	1.9	0.73	4.42	0.914002188	13.38	5.26	1.126143863	-5.07408	4.64442
232	6/24/02	EPA Special	Batch #5 Sample #3 30D	21.2	4.65	2.26	1.62	0.63	3.17	0.84	4.79	1.05	9.81	4.47	0.942019108	4.01016	4.01016
339	7/1/02	EPA Special	Batch #5 Sample #3 Batch #5 Sample #4 Batch #5 Sample #4 07D	21.2	-4.05	1.87	4.13	0.57	0.71	0.71	4.84	0.910494371	13.16	4.32	1.136001761	-8.53182	4.56258
451	7/10/02	EPA Special	Batch #5 Sample #4 Batch #5 Sample #4 07D	21.1	0.3	1.83	2.63	0.53	1.7	0.7	4.33	0.878009112	11.63	5.46	1.070046728	6.60858	4.58304
64	6/10/02	EPA Special	Batch #5 Sample #4 14D	21.1	1	2.07	2.09	0.6	1.3	0.77	3.39	0.976165969	10.13	5.42	0.886002257	2.51658	3.76464
142	6/17/02	EPA Special	Batch #5 Sample #4 21D	21.1	-2.48	2.27	2.82	0.69	2.44	0.89	5.26	1.126143863	12.42	4.96	1.068269629	-3.70326	4.48074
233	6/24/02	EPA Special	Batch #5 Sample #4 30D	21.1	1.96	1.96	2.83	0.57	1.64	0.75	4.47	0.942019108	11	5.26	0.928008621	-2.9667	3.8874
340	7/1/02	EPA Special	Batch #5 Sample #4 Batch #5 Sample #5 Batch #5 Sample #5 07D	21.1	-4.17	2.23	2.09	0.68	2.23	0.91	4.32	1.136001761	12.74	4.11	1.118257573	6.62904	4.9104
452	7/10/02	EPA Special	Batch #5 Sample #5 Batch #5 Sample #5 07D	21.8	3.23	2.24	2.19	0.65	3.27	0.85	5.46	1.070046728	48.4	190.85	6.510675848	-99.7425	29.95344
65	6/10/02	EPA Special	Batch #5 Sample #5 07D	21.8	1.23	1.84	2.38	0.53	3.04	0.71	5.42	0.886002257	72.64	192.77	9.72824753	-16.2657	45.48258
143	6/17/02	EPA Special	Batch #5 Sample #5 07D	21.8	1.23	1.84	2.38	0.53	3.04	0.71	5.42	0.886002257	72.64	192.77	9.72824753	-16.2657	45.48258

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Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
234	6/24/02	EPA Special	Batch #5 Sample #5 14D	21.8	-1.81	2.19	3.05	0.66	1.91	0.84	4.96	1.068269629	30.17	201.12	4.115349317	-56.2445	18.74136
341	7/1/02	EPA Special	Batch #5 Sample #5 21D	21.8	-1.45	1.9	2.04	0.56	3.22	0.74	5.26	0.928008621	48.37	197.09	6.532442116	-37.9942	30.44448
453	7/10/02	EPA Special	Batch #5 Sample #5 30D	21.8	3.24	2.4	2.82	0.69	1.29	0.88	4.11	1.118257573	37.09	199.43	5.299528281	-53.4006	24.30648
66	6/10/02	EPA Special	Batch #6 Sample #1 14D	24.5	-48.75	14.64	138.33	4.17	52.52	5	190.85	6.510675848	51.95	164.29	7.353318979	-35.805	34.00452
144	6/17/02	EPA Special	Batch #6 Sample #1 07D	24.5	-7.95	22.23	138.27	6.22	54.5	7.48	192.77	9.72824753	44.36	148.95	5.932099123	-15.1813	27.98928
235	6/24/02	EPA Special	Batch #6 Sample #1 14D	24.5	-27.49	9.16	136.77	2.6	64.35	3.19	201.12	4.115349317	18.43	166.25	2.572353008	-61.9529	11.70312
342	7/1/02	EPA Special	Batch #6 Sample #1 21D	24.5	-18.57	14.88	140.59	4.18	56.5	5.02	197.09	6.532442116	33.46	162.8	4.564526262	-69.1753	21.09426
454	7/10/02	EPA Special	Batch #6 Sample #1 30D	24.5	-26.1	11.88	138.19	3.37	61.24	4.09	199.43	5.299528281	31.35	159.29	4.195771681	-55.8763	19.39608
67	6/10/02	EPA Special	Batch #6 Sample #2 14D	24.4	-17.5	16.62	114.51	4.67	49.78	5.68	164.29	7.353318979	49.2	179.95	6.801683615	-36.3574	31.18104
145	6/17/02	EPA Special	Batch #6 Sample #2 07D	24.4	-7.42	13.68	113.88	3.83	35.07	4.53	148.95	5.932099123	56.39	169.45	7.298109344	2.74164	34.35234
236	6/24/02	EPA Special	Batch #6 Sample #2 14D	24.4	-30.28	5.72	116.79	1.63	49.46	1.99	166.25	2.572353008	44.37	184.21	5.855339444	-44.521	26.76168
343	7/1/02	EPA Special	Batch #6 Sample #2 21D	24.4	-33.81	10.31	121.7	2.93	41.1	3.5	162.8	4.564526262	47.67	194.46	6.458335699	-40.7563	29.7693
455	7/10/02	EPA Special	Batch #6 Sample #2 30D	24.4	-27.31	9.48	117.83	2.69	41.46	3.22	159.29	4.195771681	38	176.79	5.113824401	-35.4981	23.69268
68	6/10/02	EPA Special	Batch #6 Sample #3 14D	25.2	-17.77	15.24	121.13	4.3	58.82	5.27	179.95	6.801683615	41.3	175.45	5.574737662	-24.3883	25.9842
146	6/17/02	EPA Special	Batch #6 Sample #3 07D	25.2	1.34	16.79	123.33	4.68	46.12	5.6	169.45	7.298109344	62.66	172.47	8.570793429	39.16044	40.63356
237	6/24/02	EPA Special	Batch #6 Sample #3 14D	25.2	-21.76	13.08	127.9	3.71	56.31	4.53	184.21	5.855339444	29.08	176.3	4.080906762	-37.9942	18.55722
344	7/1/02	EPA Special	Batch #6 Sample #3 21D	25.2	-19.92	14.55	135.82	4.1	58.64	4.99	194.46	6.458335699	36.65	175.2	4.851360634	-0.36828	22.6083
456	7/10/02	EPA Special	Batch #6 Sample #3 30D	25.2	-17.35	11.58	124.61	3.26	52.18	3.94	176.79	5.113824401	29.48	180.39	4.190680136	-68.6638	19.2324
69	6/10/02	EPA Special	Batch #6 Sample #4 14D	24.9	-11.92	12.7	126.06	3.56	49.39	4.29	175.45	5.574737662	30.38	163.06	4.156164097	-37.4213	19.04826
147	6/17/02	EPA Special	Batch #6 Sample #4 07D	24.9	19.14	19.86	122.02	5.48	50.45	6.59	172.47	8.570793429	70.6	179.9	9.305847624	-4.31706	43.23198
238	6/24/02	EPA Special	Batch #6 Sample #4 14D	24.9	-18.57	9.07	117.39	2.57	58.91	3.17	176.3	4.080906762	30.22	180.59	4.004310178	-92.1723	17.86158
345	7/1/02	EPA Special	Batch #6 Sample #4 21D	24.9	-0.18	11.05	122.38	3.09	52.82	3.74	175.2	4.851360634	44.14	176.63	5.796291918	-57.82	26.55708
457	7/10/02	EPA Special	Batch #6 Sample #4 30D	24.9	-33.56	9.4	128.29	2.67	52.1	3.23	180.39	4.190680136	42.87	184.96	6.072133068	-76.8068	27.25272
70	6/10/02	EPA Special	Batch #6 Sample #5 14D	23.6	-18.29	9.31	115.17	2.64	47.89	3.21	163.06	4.156164097	29.31	78.33	3.532775113	2.20968	16.28616
148	6/17/02	EPA Special	Batch #6 Sample #5 07D	23.6	-2.11	21.13	121.78	5.92	58.12	7.18	179.9	9.305847624	13	4.33	1.25	3.35544	5.34006
239	6/24/02	EPA Special	Batch #6 Sample #5 14D	23.6	-45.05	8.73	116.85	2.51	63.74	3.12	180.59	4.004310178	11.1	3.43	0.952102936	-3.31452	3.82602
346	7/1/02	EPA Special	Batch #6 Sample #5 21D	23.6	-28.26	12.98	121.54	3.69	55.09	4.47	176.63	5.796291918	12.79	3.11	1.054371851	5.89248	4.41936
458	7/10/02	EPA Special	Batch #6 Sample #5 30D	23.6	-37.54	13.32	119.27	3.82	65.69	4.72	184.96	6.072133068	9.58	10.1	0.990202	-7.5702	4.1943
78	6/11/02	EPA Special	Batch #7 Sample #1 14D	29.8	2.05	2.02	3.47	0.58	3.45	0.76	6.92	0.956033472	13.03	6.44	1.186001686	6.01524	5.09454
268	6/25/02	EPA Special	Batch #7 Sample #1 14D	29.8	1.91	2.23	3.8	0.64	2.98	0.84	6.78	1.056030303	10.08	6.68	0.908019824	0.6138	3.7851

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Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
358	7/2/02	EPA Special	Batch #7 Sample #1 21D	29.8	2.89	2.52	3.36	0.72	2.87	0.94	6.23	1.184060809	12.06	5.38	1.09808925	12.11232	4.86948
464	7/11/02	EPA Special	Batch #7 Sample #1 30D	29.8	1.39	2.34	4.28	0.67	2.5	0.85	6.78	1.082312339	13.63	6.35	1.188107739	-1.98462	4.86948
168	6/18/02	EPA Special	Batch #7 Sample #10 7D	29.8	2.18	3.2	3.33	0.92	3.23	1.19	6.56	1.504160896	13.51	6.38	1.16211015	0.83886	4.95132
79	6/11/02	EPA Special	Batch #7 Sample #2	28.6	2.94	2.49	2.31	0.71	4.13	0.95	6.44	1.186001686	9.68	5.91	0.834086326	4.68534	3.64188
169	6/18/02	EPA Special	Batch #7 Sample #2 07D	28.6	0.41	2.42	3.16	0.71	3.22	0.92	6.38	1.16211015	12.75	7.11	1.1980818	1.67772	5.09454
269	6/25/02	EPA Special	Batch #7 Sample #2 14D	28.6	0.3	1.85	2.33	0.54	4.35	0.73	6.68	0.908019824	10.2	7.28	0.97800818	6.3426	4.17384
359	7/2/02	EPA Special	Batch #7 Sample #2 21D	28.6	5.92	2.38	3.03	0.67	2.35	0.87	5.38	1.09808925	13.12	7.15	1.242014493	-7.99986	5.09454
465	7/11/02	EPA Special	Batch #7 Sample #2 30D	28.6	-0.97	2.38	1.58	0.7	4.77	0.96	6.35	1.188107739	11.39	6.23	0.990202	-3.92832	4.13292
80	6/11/02	EPA Special	Batch #7 Sample #3	30.9	2.29	1.78	3.27	0.51	2.64	0.66	5.91	0.834086326	15.49	7.82	1.376117728	-8.83872	5.85156
170	6/18/02	EPA Special	Batch #7 Sample #3 07D	30.9	0.82	2.49	3.42	0.73	3.69	0.95	7.11	1.1980818	13.46	6.6	1.202538981	10.08678	5.27868
270	6/25/02	EPA Special	Batch #7 Sample #3 14D	30.9	3.1	2.04	3.02	0.59	4.26	0.78	7.28	0.97800818	12.51	7.78	1.146342008	3.31452	5.05362
360	7/2/02	EPA Special	Batch #7 Sample #3 21D	30.9	-3.91	2.49	3.82	0.75	3.33	0.99	7.15	1.242014493	13.29	8.86	1.310343466	3.10992	5.7288
466	7/11/02	EPA Special	Batch #7 Sample #3 30D	30.9	-1.92	2.02	3.52	0.61	2.71	0.78	6.23	0.990202	11.31	7.45	1.016710382	2.72118	4.5012
81	6/11/02	EPA Special	Batch #7 Sample #4	29	-4.32	2.86	5.18	0.84	2.64	1.09	7.82	1.376117728	12.09	6	1.084066419	-1.96416	4.54212
171	6/18/02	EPA Special	Batch #7 Sample #4 07D	29	4.93	2.58	3.74	0.75	2.86	0.94	6.6	1.202538981	12.15	5.93	1.178006791	10.86426	5.115
271	6/25/02	EPA Special	Batch #7 Sample #4 14D	29	1.62	2.47	5.04	0.71	2.74	0.9	7.78	1.146342008	10.21	5.64	0.942019108	6.71088	4.07154
361	7/2/02	EPA Special	Batch #7 Sample #4 21D	29	1.52	2.8	5.52	0.81	3.34	1.03	8.86	1.310343466	10.94	6.19	0.970051545	-1.59588	4.17384
467	7/11/02	EPA Special	Batch #7 Sample #4 30D	29	1.33	2.2	5.43	0.64	2.02	0.79	7.45	1.016710382	14.11	4.33	1.130707743	0.98208	4.93086
82	6/11/02	EPA Special	Batch #7 Sample #5	29.1	-0.96	2.22	2.86	0.66	3.14	0.86	6	1.084066419	17.08	33.23	1.878776197	1.6368	8.40906
172	6/18/02	EPA Special	Batch #7 Sample #5 07D	29.1	5.31	2.5	2.56	0.71	3.37	0.94	5.93	1.178006791	18.66	34.62	2.09117192	-8.10216	9.35022
272	6/25/02	EPA Special	Batch #7 Sample #5 14D	29.1	3.28	1.99	2.97	0.57	2.67	0.75	5.64	0.942019108	19.9	32.34	2.16778689	9.75942	9.8208
362	7/2/02	EPA Special	Batch #7 Sample #5 21D	29.1	-0.78	2.04	3.52	0.59	2.67	0.77	6.19	0.970051545	18.16	33.99	2.048999756	-1.18668	9.14562
468	7/11/02	EPA Special	Batch #7 Sample #5 30D	29.1	0.48	2.41	3.02	0.71	1.31	0.88	4.33	1.130707743	13.05	38.25	1.466492414	-0.98208	6.48582
83	6/11/02	EPA Special	Batch #8 Sample #1	30.7	0.8	4.11	22.01	1.17	11.22	1.47	33.23	1.878776197	16.54	34.26	2.020890893	-1.82094	8.98194
173	6/18/02	EPA Special	Batch #8 Sample #1 07D	30.7	-3.96	4.57	22.14	1.31	12.48	1.63	34.62	2.09117192	18.34	36.96	2.084922061	-16.9	9.12516
273	6/25/02	EPA Special	Batch #8 Sample #1 14D	30.7	4.77	4.8	20.4	1.37	11.94	1.68	32.34	2.16778689	17.84	37.75	2.144411341	6.26076	9.47298
363	7/2/02	EPA Special	Batch #8 Sample #1 21D	30.7	-0.58	4.47	20.09	1.28	13.9	1.6	33.99	2.048999756	18.39	37.24	2.113030998	0.98208	9.32976
469	7/11/02	EPA Special	Batch #8 Sample #1 30D	30.7	-0.48	3.17	21.96	0.91	16.29	1.15	38.25	1.466492414	16.87	37.64	1.980403999	19.92804	8.9001
84	6/11/02	EPA Special	Batch #8 Sample #2	31.8	-0.89	4.39	21.83	1.26	12.43	1.58	34.26	2.020890893	15.93	37.77	1.850675552	7.40652	8.20446
174	6/18/02	EPA Special	Batch #8 Sample #2 07D	31.8	-8.26	4.46	22.61	1.3	14.35	1.63	36.96	2.084922061	17.63	37.72	2.114639449	8.9001	9.43206

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Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
274	6/25/02	EPA Special	Batch #8 Sample #2 14D	31.8	3.06	4.63	20.06	1.32	17.69	1.69	37.75	2.144411341	17.73	39.15	2.078701518	-4.6035	9.24792
364	7/2/02	EPA Special	Batch #8 Sample #2 21D	31.8	0.48	4.56	22.37	1.32	14.87	1.65	37.24	2.113030998	12.25	38.59	1.338431918	-6.05616	5.91294
470	7/11/02	EPA Special	Batch #8 Sample #2 30D	31.8	9.74	4.35	20.44	1.22	17.2	1.56	37.64	1.980403999	11.94	38.84	1.388416364	-1.5345	6.09708
85	6/11/02	EPA Special	Batch #8 Sample #3	32.5	3.62	4.01	21.16	1.15	16.61	1.45	37.77	1.850675552	15.61	34.99	1.792874786	-13.565	7.89756
175	6/18/02	EPA Special	Batch #8 Sample #3 07D	32.5	4.35	4.61	21.43	1.31	16.29	1.66	37.72	2.114639449	22.03	35.89	2.553448648	-6.66996	11.37576
275	6/25/02	EPA Special	Batch #8 Sample #3 14D	32.5	-2.25	4.52	23.81	1.29	15.34	1.63	39.15	2.078701518	16.82	37.22	2.122498528	14.5266	9.59574
365	7/2/02	EPA Special	Batch #8 Sample #3 21D	32.5	-2.96	2.89	22.71	0.83	15.88	1.05	38.59	1.338431918	21.27	37.15	2.411327435	-4.13292	10.68012
471	7/11/02	EPA Special	Batch #8 Sample #3 30D	32.5	-0.75	2.98	22.29	0.86	16.55	1.09	38.84	1.388416364	16.45	34.7	1.878776197	-0.9207	8.34768
86	6/11/02	EPA Special	Batch #8 Sample #4	32.1	-6.63	3.86	22.54	1.12	12.45	1.4	34.99	1.792874786	17.12	33.95	1.975702407	0.34782	8.85918
176	6/18/02	EPA Special	Batch #8 Sample #4 07D	32.1	-3.26	5.56	21.86	1.6	14.03	1.99	35.89	2.553448648	17.18	33.98	1.878776197	3.60096	8.42952
276	6/25/02	EPA Special	Batch #8 Sample #4 14D	32.1	7.1	4.69	22.03	1.31	15.19	1.67	37.22	2.122498528	15.6	34.88	1.828797419	13.27854	8.24538
366	7/2/02	EPA Special	Batch #8 Sample #4 21D	32.1	-2.02	5.22	22.76	1.51	14.39	1.88	37.15	2.411327435	17.42	37.64	2.063055986	11.68266	9.32976
472	7/11/02	EPA Special	Batch #8 Sample #4 30D	32.1	-0.45	4.08	20.67	1.17	14.03	1.47	34.7	1.878776197	15.35	36.79	1.808535319	-4.95132	7.89756
87	6/11/02	EPA Special	Batch #8 Sample #5	31.3	0.17	4.33	22.9	1.25	11.05	1.53	33.95	1.975702407	10.75	8.1	0.93236259	-1.28898	4.01016
177	6/18/02	EPA Special	Batch #8 Sample #5 07D	31.3	1.76	4.12	20.24	1.17	13.74	1.47	33.98	1.878776197	12.07	-0.35	0.958018789	-3.35544	3.7851
277	6/25/02	EPA Special	Batch #8 Sample #5 14D	31.3	6.49	4.03	20.39	1.14	14.49	1.43	34.88	1.828797419	35.28	51.65	4.208004278	25.14534	18.59814
367	7/2/02	EPA Special	Batch #8 Sample #5 21D	31.3	5.71	4.56	22.45	1.29	15.19	1.61	37.64	2.063055986	22.99	36.99	2.6337236	8.32722	12.29646
473	7/11/02	EPA Special	Batch #8 Sample #5 30D	31.3	-2.42	3.86	21.4	1.12	15.39	1.42	36.79	1.808535319	15.73	9.41	1.662077014	10.06632	7.3656
102	6/12/02	EPA Special	Batch #9 Sample #1	32.3	4.89	2.98	7.93	0.85	4.77	1.07	12.7	1.366528448	9.23	10.17	0.868331734	0.73656	3.76464
186	6/19/02	EPA Special	Batch #9 Sample #1 07D	32.3	-0.3	3.44	9.15	0.99	5	1.23	14.15	1.578923684	17.45	9.71	1.708566651	5.5242	7.44744
284	6/26/02	EPA Special	Batch #9 Sample #1 14D	32.3	1.35	3.27	10.58	0.94	3.33	1.15	13.91	1.485294584	13.84	9.5	1.254192968	8.0817	5.46282
374	7/3/02	EPA Special	Batch #9 Sample #1 21D	32.3	5.72	3.17	8.68	0.9	4.91	1.12	13.59	1.436802004	13.12	9.6	1.188486432	0.77748	5.13546
487	7/12/02	EPA Special	Batch #9 Sample #1 30D	32.2	-2.32	3.02	10	0.88	3.26	1.08	13.26	1.393125981	12.83	9.3	1.280624847	8.26584	5.79018
103	6/12/02	EPA Special	Batch #9 Sample #2	32.8	0.36	1.84	6.35	0.54	3.82	0.68	10.17	0.868331734	17.4	12.47	1.660271062	6.07662	7.20192
187	6/19/02	EPA Special	Batch #9 Sample #2 07D	32.8	2.7	3.64	5.1	1.06	4.61	1.34	9.71	1.708566651	13.97	10.88	1.352479205	13.44222	6.11754
285	6/26/02	EPA Special	Batch #9 Sample #2 14D	32.8	3.95	2.67	4.98	0.77	4.52	0.99	9.5	1.254192968	16.27	10.62	1.596245595	18.53676	7.2633
375	7/3/02	EPA Special	Batch #9 Sample #2 21D	32.8	0.38	2.51	5.78	0.74	3.82	0.93	9.6	1.188486432	12.99	11.77	1.28844868	5.97432	5.70834
488	7/12/02	EPA Special	Batch #9 Sample #2 30D	32.8	4.04	2.83	6.72	0.8	2.58	1	9.3	1.280624847	7.67	12.62	0.804300939	0.45012	3.53958
104	6/12/02	EPA Special	Batch #9 Sample #3	33.9	2.97	3.52	6.89	1.02	5.58	1.31	12.47	1.660271062	15.31	11.64	1.448067678	-9.207	5.95386
188	6/19/02	EPA Special	Batch #9 Sample #3 07D	33.9	6.57	2.99	6.91	0.84	3.97	1.06	10.88	1.352479205	14	11.17	1.354178718	10.18908	6.01524

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EPA Special

Complete File of Nutranl Samples

Sample ID	Sample Date	Sample Group	Description	Weight	U-238 Activity	U-238 Uncertainty	Th-232 Activity	Th-232 Uncertainty	Ra-226 Activity	Ra-226 Uncertainty	Total Radium Activity	Total Radium Uncertainty					
286	6/26/02	EPA Special	Batch #9 Sample #3 14D	33.9	9.06	3.55	5.65	0.98	4.97	1.26	10.62	1.596245595	14.49	11.09	1.466492414	-14.9358	6.17892
376	7/3/02	EPA Special	Batch #9 Sample #3 21D	33.9	2.92	2.79	6.81	0.8	4.96	1.01	11.77	1.28844868	11.03	10.85	1.096357606	-2.39382	4.74672
489	7/12/02	EPA Special	Batch #9 Sample #3 30D	33.9	0.22	1.73	8.8	0.5	3.82	0.63	12.62	0.804300939	13.87	9.38	1.224418229	9.96402	5.40144
105	6/12/02	EPA Special	Batch #9 Sample #4 07D	32.1	-4.5	2.91	5.11	0.88	6.53	1.15	11.64	1.448067678	12.3	11.87	1.190168055	1.90278	5.13546
189	6/19/02	EPA Special	Batch #9 Sample #4 14D	32.1	4.98	2.94	6.22	0.83	4.95	1.07	11.17	1.354178718	18.99	11.85	1.899078724	3.19176	8.42952
287	6/26/02	EPA Special	Batch #9 Sample #4 21D	32.1	-7.3	3.02	7.62	0.91	3.47	1.15	11.09	1.466492414	14.34	13.15	1.432236014	14.9358	6.48582
377	7/3/02	EPA Special	Batch #9 Sample #4 30D	32.1	-1.17	2.32	6.98	0.68	3.87	0.86	10.85	1.096357606	19.37	13.76	1.84805303	3.76464	7.93848
490	7/12/02	EPA Special	Batch #9 Sample #5 07D	32.1	4.87	2.64	4.69	0.76	4.69	0.96	9.38	1.224418229	12.67	13.94	1.33225373	1.75956	5.76972
106	6/12/02	EPA Special	Batch #9 Sample #5 14D	36.5	0.93	2.51	6.73	0.73	5.14	0.94	11.87	1.190168055	9.68	0.64	0.810246876	5.115	3.31452
190	6/19/02	EPA Special	Batch #9 Sample #5 21D	36.5	1.56	4.12	7.27	1.19	4.58	1.48	11.85	1.899078724	1635.57	3468.64	231.6560176	-3227.5	1022.795
288	6/26/02	EPA Special	Batch #9 Sample #5 30D	36.5	7.3	3.17	6.96	0.88	6.19	1.13	13.15	1.432236014	22.28	21.55	2.359872878	14.60844	10.80288
378	7/3/02	EPA Special	Batch #9 Sample #5 07D	36.5	1.84	3.88	5.88	1.12	7.88	1.47	13.76	1.84805303	21.52	14.37	2.202294258	0.1023	9.24792
491	7/12/02	EPA Special	Batch #9 Sample #5 14D	36.5	0.86	2.82	7.1	0.82	6.84	1.05	13.94	1.33225373	14.22	4.36	1.180042372	6.21984	5.05362

NUTRANL

Chronological Order



Nutranl Gamma Spec Report- 341 East Ohio Street Site

Complete File of Nutranl Samples

Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium						
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty						
28	6/6/02	soil standard	soilstd060602	36.9	0.2	3.28	5.82	0.97	3.83	1.23	9.65	1.566460979	14.41	-0.07	1.180042	9.04332	5.0127	
29	6/6/02	background	bkg060602	7.5	4.42	2.45	-0.49	0.7	0.42	0.95	-0.07	1.180042372	18.12	5.66	1.666433	19.58022	7.7748	
30	6/6/02	soil standard	soilstd060602	36.9	9.57	3.8	4.55	1.03	1.11	1.31	5.66	1.666433317	22.44	6.98	2.098976	6.05616	9.24792	
31	6/6/02	soil standard	soilstd060602	36.9	2.96	4.52	5.13	1.31	1.85	1.64	6.98	2.098975941	17.82	8.68	1.672633	-5.97432	7.2633	
32	6/6/02	soil standard	soilstd060602	36.9	-2.92	3.55	5.46	1.04	3.22	1.31	8.68	1.672632655	5.42	7.95	0.498197	1.04346	2.18922	
33	6/6/02	soil standard	soilstd060602	36.9	0.51	1.07	5.53	0.31	2.42	0.39	7.95	0.498196748	13.81	-0.26	1.032279	-3.94878	4.17384	
34	6/7/02	background	bkg060702	7.5	-1.93	2.04	-0.33	0.6	0.07	0.84	-0.26	1.032279032	18.32	10.25	1.794492	-11.8259	7.44744	
35	6/7/02	soil standard	soilstd060702	36.9	-5.78	3.64	6.97	1.11	3.28	1.41	10.25	1.794491571	40.31	165.24	5.537192	-101.175	25.75914	
36	6/7/02	exclusion zone	S1001 A.75-5	28.9	-49.45	12.59	146.36	3.62	18.88	4.19	165.24	5.537192429	54.62	159.83	7.138242	-93.0725	33.43164	
37	6/7/02	exclusion zone	S1002 B-4.5	28	-45.49	16.34	141.46	4.68	18.37	5.39	159.83	7.138242081	31.72	155.89	4.159062	-50.7613	18.3117	
38	6/7/02	EPA Special	Batch #1 Sample	21.7	-24.81	8.95	86.72	2.57	69.17	3.27	155.89	4.159062394	43.67	161	5.894065	-34.6183	26.47524	
39	6/7/02	EPA Special	Batch #1 Sample	20.3	-16.92	12.94	96.26	3.66	64.74	4.62	161	5.894064811	37.28	177.99	5.238091	-36.6848	23.4267	
40	6/7/02	EPA Special	Batch #1 Sample	21.6	-17.93	11.45	108.06	3.26	69.93	4.1	177.99	5.238091255	26.08	103.39	3.379601	-29.2578	15.07902	
41	6/7/02	EPA Special	Batch #1 Sample	21.9	-14.3	7.37	64.44	2.11	38.95	2.64	103.39	3.379600568	35.72	190.28	4.882008	-79.9372	21.64668	
42	6/7/02	EPA Special	Batch #2 Sample	21.5	-39.07	10.58	116.5	3.04	73.78	3.82	190.28	4.882007784	10.61	6.49	0.992018	-3.15084	4.07154	
43	6/7/02	EPA Special	Batch #2 Sample	27.8	-1.54	1.99	2.8	0.6	3.69	0.79	6.49	0.992018145	13.12	7.18	1.194738	10.72104	5.40144	
44	6/7/02	EPA Special	Batch #2 Sample	27.8	5.24	2.64	5.62	0.75	1.56	0.93	7.18	1.194738465	10.65	5.76	0.934077	-0.6138	3.94878	
45	6/7/02	EPA Special	Batch #2 Sample	27.2	-0.3	1.93	3.23	0.57	2.53	0.74	5.76	0.934077085	13.61	6.48	1.236002	3.39636	5.19684	
46	6/7/02	EPA Special	Batch #2 Sample	26.7	1.66	2.54	2.59	0.74	3.89	0.99	6.48	1.236001618	10.02	6.86	0.91214	2.18922	3.92832	
47	6/7/02	EPA Special	Batch #2 Sample	28.5	1.07	1.92	3.41	0.56	3.45	0.72	6.86	0.91214034	10.75	10.53	1	-1.98462	4.17384	
48	6/7/02	exclusion zone	S1013 C.2-3.5	19.8	-0.97	2.04	3.77	0.6	6.76	0.8	10.53	1	11.71	4.04	0.992018	-5.44236	3.9897	
49	6/7/02	EPA Special	Batch #3 Sample	28.3	-2.66	1.95	1.36	0.6	2.68	0.79	4.04	0.992018145	12.49	2.88	1.170043	2.2506	4.88994	
50	6/7/02	EPA Special	Batch #3 Sample	28	1.1	2.39	1.79	0.71	1.09	0.93	2.88	1.170042734	10.85	2.63	0.878009	1.5345	3.74418	
51	6/7/02	EPA Special	Batch #3 Sample	27	0.75	1.83	1.47	0.53	1.16	0.7	2.63	0.878009112	11.92	2.07	0.970052	1.45266	4.092	
52	6/7/02	EPA Special	Batch #3 Sample	28.6	0.71	2	1.39	0.59	0.68	0.77	2.07	0.970051545	8.85	2.53	0.70214	7.161	3.02808	
53	6/7/02	EPA Special	Batch #3 Sample	28.9	3.5	1.48	-0.03	0.41	2.56	0.57	2.53	0.702139587	11.24	0.76	0.966075	-0.06138	3.86694	
54	6/10/02	background	bkg061002	7.5	-0.03	1.89	-0.2	0.57	0.96	0.78	0.76	0.966074531	10.68	7.62	0.960469	4.01016	4.2966	
55	6/10/02	soil standard	soilstd061002	36.9	1.96	2.1	5.19	0.6	2.43	0.75	7.62	0.960468636	12.07	3.98	1.05603	-0.5115	4.37844	
56	6/10/02	EPA Special	Batch #4 Sample	27	-0.25	2.14	1.89	0.64	2.09	0.84	3.98	1.056030303	13.8	2.97	1.192015	5.25822	5.15592	
57	6/10/02	EPA Special	Batch #4 Sample	28.9	2.57	2.52	1.89	0.72	1.08	0.95	2.97	1.192015101	12.76	3.58	1.158016	5.34006	4.86948	
58	6/10/02	EPA Special	Batch #4 Sample	29.2	2.61	2.38	1.31	0.69	2.27	0.93	3.58	1.158015544	10.84	2.91	0.986002	1.10484	4.1943	

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Complete File of Nutranl Samples

Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
59	6/10/02	EPA Special	Batch #4 Sample #4	27.7	0.54	2.05	1.65	0.59	1.26	0.79	2.91	0.986002028	10.38	2.95	0.864002	6.07662	3.74418
60	6/10/02	EPA Special	Batch #4 Sample #5	29.6	2.97	1.83	1.54	0.52	1.41	0.69	2.95	0.864002315	11.14	4.51	0.984073	8.85918	4.2966
61	6/10/02	EPA Special	Batch #5 Sample #1	23.5	4.33	2.1	2.25	0.6	2.26	0.78	4.51	0.984073168	14.91	6.05	1.436001	-0.7161	6.01524
62	6/10/02	EPA Special	Batch #5 Sample #2	22.9	-0.35	2.94	2.91	0.86	3.14	1.15	6.05	1.436001393	11.54	5.22	1.002098	9.53436	4.33752
63	6/10/02	EPA Special	Batch #5 Sample #3	21.2	4.66	2.12	1.4	0.59	3.82	0.81	5.22	1.0020978	9.7	4.33	0.878009	0.6138	3.74418
64	6/10/02	EPA Special	Batch #5 Sample #4	21.1	0.3	1.83	2.63	0.53	1.7	0.7	4.33	0.878009112	11.63	5.46	1.070047	6.60858	4.58304
65	6/10/02	EPA Special	Batch #5 Sample #5	21.8	3.23	2.24	2.19	0.65	3.27	0.85	5.46	1.070046728	48.4	190.85	6.510676	-99.7425	29.95344
66	6/10/02	EPA Special	Batch #6 Sample #1	24.5	-48.75	14.64	138.33	4.17	52.52	5	190.85	6.510675848	51.95	164.29	7.353319	-35.805	34.00452
67	6/10/02	EPA Special	Batch #6 Sample #2	24.4	-17.5	16.62	114.51	4.67	49.78	5.68	164.29	7.353318979	49.2	179.95	6.801684	-36.3574	31.18104
68	6/10/02	EPA Special	Batch #6 Sample #3	25.2	-17.77	15.24	121.13	4.3	58.82	5.27	179.95	6.801683615	41.3	175.45	5.574738	-24.3883	25.9842
69	6/10/02	EPA Special	Batch #6 Sample #4	24.9	-11.92	12.7	126.06	3.56	49.39	4.29	175.45	5.574737662	30.38	163.06	4.156164	-37.4213	19.04826
70	6/10/02	EPA Special	Batch #6 Sample #5	23.6	-18.29	9.31	115.17	2.64	47.89	3.21	163.06	4.156164097	29.31	78.33	3.532775	2.20968	16.28616
71	6/10/02	exclusion zone	S1034 B.5-5.75	17	1.08	7.96	53.98	2.23	24.35	2.74	78.33	3.532775113	14.72	0.67	1.080046	-9.98448	4.092
72	6/11/02	background	bkg061102	7.5	-4.88	2	-0.4	0.64	1.07	0.87	0.67	1.080046295	12.97	9.49	1.256025	-0.32736	5.29914
73	6/11/02	soil standard	soilstd061102	36.9	-0.16	2.59	5.16	0.76	4.33	1	9.49	1.256025477	17.9	3.51	1.560288	6.40398	6.83364
74	6/11/02	Pre EPA	B-4.5 Pre-EPA #1	22.8	3.13	3.34	1.98	0.96	1.53	1.23	3.51	1.560288435	15.94	6.02	1.370036	-14.7517	5.46282
75	6/11/02	Pre EPA	B-4.5 Pre-EPA #2	24.6	-7.21	2.67	2.95	0.83	3.07	1.09	6.02	1.370036496	19.13	5.15	1.652059	9.45252	7.07916
76	6/11/02	Pre EPA	B-4.5 Pre-EPA #3	21.8	4.62	3.46	1.42	0.98	3.73	1.33	5.15	1.652059321	15.37	3.8	1.254193	-1.75956	5.3196
77	6/11/02	Pre EPA	B-4.5 Pre-EPA #4	26.8	-0.86	2.6	2.56	0.77	1.24	0.99	3.8	1.254192968	10.43	6.92	0.956033	4.1943	4.13292
78	6/11/02	EPA Special	Batch #7 Sample #1	29.8	2.05	2.02	3.47	0.58	3.45	0.76	6.92	0.956033472	13.03	6.44	1.186002	6.01524	5.09454
79	6/11/02	EPA Special	Batch #7 Sample #2	28.6	2.94	2.49	2.31	0.71	4.13	0.95	6.44	1.186001686	9.68	5.91	0.834086	4.68534	3.64188
80	6/11/02	EPA Special	Batch #7 Sample #3	30.9	2.29	1.78	3.27	0.51	2.64	0.66	5.91	0.834086326	15.49	7.82	1.376118	-8.83872	5.85156
81	6/11/02	EPA Special	Batch #7 Sample #4	29	-4.32	2.86	5.18	0.84	2.64	1.09	7.82	1.376117728	12.09	6	1.084066	-1.96416	4.54212
82	6/11/02	EPA Special	Batch #7 Sample #5	29.1	-0.96	2.22	2.86	0.66	3.14	0.86	6	1.084066419	17.08	33.23	1.878776	1.6368	8.40906
83	6/11/02	EPA Special	Batch #8 Sample #1	30.7	0.8	4.11	22.01	1.17	11.22	1.47	33.23	1.878776197	16.54	34.26	2.020891	-1.82094	8.98194
84	6/11/02	EPA Special	Batch #8 Sample #2	31.8	-0.89	4.39	21.83	1.26	12.43	1.58	34.26	2.020890893	15.93	37.77	1.850676	7.40652	8.20446
85	6/11/02	EPA Special	Batch #8 Sample #3	32.5	3.62	4.01	21.16	1.15	16.61	1.45	37.77	1.850675552	15.61	34.99	1.792875	-13.565	7.89756

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
86	6/11/02 EPA Special	Batch #8 Sample #4		32.1	-6.63	3.86	22.54	1.12	12.45	1.4	34.99	1.792874786	17.12	33.95	1.975702	0.34782	8.85918
87	6/11/02 EPA Special	Batch #8 Sample #5		31.3	0.17	4.33	22.9	1.25	11.05	1.53	33.95	1.975702407	10.75	8.1	0.932363	-1.28898	4.01016
88	6/11/02 exclusion zone	S1049 B-5-9		30.1	-0.63	1.96	4.57	0.58	3.53	0.73	8.1	0.93236259	10.49	3.98	0.95	3.29406	3.9897
89	6/11/02 EPA	S1050 B-8.5		36.5	1.61	1.95	2.12	0.57	1.86	0.76	3.98	0.95	11.25	7.42	1.026158	6.05616	4.5012
90	6/11/02 EPA	EPA #1		34.1	2.96	2.2	4.44	0.63	2.98	0.81	7.42	1.026157883	12.81	3.57	1.108016	3.60096	4.7058
91	6/11/02 EPA	EPA #2		34.4	1.76	2.3	1.14	0.66	2.43	0.89	3.57	1.108016245	11.33	4.01	0.994032	6.83364	4.23522
92	6/11/02 EPA	S1052 B-8.5		35.2	3.34	2.07	1.58	0.59	2.43	0.8	4.01	0.994032193	14.51	3.01	1.184061	10.9461	5.3196
93	6/11/02 EPA	EPA #4		35.7	5.35	2.6	1.33	0.72	1.68	0.94	3.01	1.184060809	9.79	5.49	0.920054	3.23268	3.84648
94	6/11/02 EPA	S1054 B-8.5		25.8	1.58	1.88	2.24	0.56	3.25	0.73	5.49	0.920054346	11.99	4.97	1.008018	4.31706	4.33752
95	6/11/02 EPA	EPA #1		26.9	2.11	2.12	1.8	0.6	3.17	0.81	4.97	1.008017857	10.68	6.13	1.086002	5.17638	4.66488
96	6/11/02 EPA	S1056 A-B/2-6		28.3	2.53	2.28	3.44	0.65	2.69	0.87	6.13	1.086001842	12.17	5.37	1.05603	-1.61634	4.33752
97	6/11/02 EPA	EPA #2		27.1	-0.79	2.12	2.11	0.64	3.26	0.84	5.37	1.056030303	13.95	4.49	1.212106	5.58558	5.17638
98	6/11/02 EPA	S1057 A-B/2-6		25.3	2.73	2.53	1.74	0.74	2.75	0.96	4.49	1.212105606	17.73	-0.17	1.434503	4.6035	5.9334
99	6/12/02 background	EPA #3		7.5	2.25	2.9	-1.05	0.83	0.88	1.17	-0.17	1.434503398	16.46	9.31	1.666433	-2.10738	7.12008
100	6/12/02 soil standard	S1058 A-B/2-6		36.9	-1.03	3.48	6.34	1.03	2.97	1.31	9.31	1.666433317	41.96	289.18	5.887147	-74.147	27.2118
101	6/12/02 exclusion zone	soilstd061202		32.7	-36.24	13.3	207.42	3.76	81.76	4.53	289.18	5.887147017	13.87	12.7	1.366528	10.00494	6.09708
102	6/12/02 EPA Special	S1060 D-5.5		32.3	4.89	2.98	7.93	0.85	4.77	1.07	12.7	1.366528448	9.23	10.17	0.868332	0.73656	3.76464
103	6/12/02 EPA Special	Batch#9		32.8	0.36	1.84	6.35	0.54	3.82	0.68	10.17	0.868331734	17.4	12.47	1.660271	6.07662	7.20192
104	6/12/02 EPA Special	Sample#1		33.9	2.97	3.52	6.89	1.02	5.58	1.31	12.47	1.660271062	15.31	11.64	1.448068	-9.207	5.95386
105	6/12/02 EPA Special	Batch#9		32.1	-4.5	2.91	5.11	0.88	6.53	1.15	11.64	1.448067678	12.3	11.87	1.190168	1.90278	5.13546
106	6/12/02 EPA Special	Sample#2		36.5	0.93	2.51	6.73	0.73	5.14	0.94	11.87	1.190168055	9.68	0.64	0.810247	5.115	3.31452
107	6/13/02 background	Batch#9		7.5	2.5	1.62	-0.75	0.47	1.39	0.66	0.64	0.810246876	16.11	7.51	1.522695	10.61874	6.83364
108	6/13/02 soil standard	Sample#3		36.9	5.19	3.34	5.05	0.95	2.46	1.19	7.51	1.522694979	35.34	164.51	4.757226	-60.2138	21.01242
109	6/13/02 EPA Special	soilstd061302		21.7	-29.43	10.27	93.61	2.94	70.9	3.74	164.51	4.757226082	47.53	158.6	6.378221	-41.9839	28.82814
110	6/13/02 EPA Special	Batch #1 Sample #1 7D		20.3	-20.52	14.09	98.91	4.01	59.69	4.96	158.6	6.378220755	50.77	178.28	6.749852	-36.8075	30.60816
111	6/13/02 EPA Special	Batch #1 Sample #2 7D		21.6	-17.99	14.96	108.92	4.23	69.36	5.26	178.28	6.74985185	31.24	107.36	4.246375	-17.6161	19.21194
112	6/13/02 EPA Special	Batch #1 Sample #3 7D		21.9	-8.61	9.39	68.91	2.66	38.45	3.31	107.36	4.246374925	49.99	194.47	7.046616	-34.2705	31.5084
113	6/13/02 EPA Special	Batch #1 Sample #4 7D		21.5	-16.75	15.4	114.67	4.38	79.8	5.52	194.47	7.046616209	11.74	-0.09	0.90802	-1.49358	3.64188
114	6/14/02 background	Batch #1 Sample #5 7D		7.5	-0.73	1.78	0.28	0.54	-0.37	0.73	-0.09	0.908019824	18.67	7.61	1.562082	7.22238	6.87456

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
115	6/14/02	soil standard	soilstd061402	36.9	3.53	3.36	4.17	0.95	3.44	1.24	7.61	1.562081944	13.1	5.3	1.126144	-1.023	4.8081
116	6/14/02	EPA Special	Batch #2 Sample #1 7D	27.8	-0.5	2.35	3.66	0.69	1.64	0.89	5.3	1.126143863	9.8	7.41	0.896437	3.70326	3.92832
117	6/14/02	EPA Special	Batch #2 Sample #2 7D	27.8	1.81	1.92	4.81	0.56	2.6	0.7	7.41	0.896437393	12.44	5.52	1.098089	1.1253	4.72626
118	6/14/02	EPA Special	Batch #2 Sample #3 7D	27.2	0.55	2.31	3.16	0.67	2.36	0.87	5.52	1.09808925	12.87	7.14	1.152085	2.7621	4.78764
119	6/14/02	EPA Special	Batch #2 Sample #4 7D	26.7	1.35	2.34	1.69	0.68	5.45	0.93	7.14	1.152085066	12.06	5.84	1.05603	2.20968	4.56258
120	6/14/02	EPA Special	Batch #2 Sample #5 7D	28.5	1.08	2.23	3.24	0.64	2.6	0.84	5.84	1.056030303	13.54	3.69	1.122007	-6.48582	4.5012
121	6/14/02	EPA Special	Batch #3 Sample #1 7D	28.3	-3.17	2.2	1.06	0.67	2.63	0.9	3.69	1.12200713	14.27	3.5	1.206027	-2.02554	4.95132
122	6/14/02	EPA Special	Batch #3 Sample #2 7D	28	-0.99	2.42	2.37	0.73	1.13	0.96	3.5	1.206026534	9.95	3.27	0.842021	0.14322	3.43728
123	6/14/02	EPA Special	Batch #3 Sample #3 7D	27	0.07	1.68	1.26	0.51	2.01	0.67	3.27	0.842021377	9.13	3.36	0.814002	10.37322	3.51912
124	6/14/02	EPA Special	Batch #3 Sample #4 7D	28.6	5.07	1.72	1.2	0.49	2.16	0.65	3.36	0.814002457	10.33	3.33	0.858021	3.84648	3.60096
125	6/14/02	EPA Special	Batch #3 Sample #5 7D	28.9	1.88	1.76	1.23	0.51	2.1	0.69	3.33	0.858020979	14.27	5.16	1.278006	6.73134	5.58558
126	6/14/02	overburden	S1066 B-2 OB #1	21.5	3.29	2.73	2.91	0.77	2.25	1.02	5.16	1.27800626	14.34	3.27	1.162497	0.12276	4.78764
127	6/14/02	overburden	S1067 B-2 OB #2	24.5	0.06	2.34	-0.07	0.67	3.34	0.95	3.27	1.162497312	15.18	2.8	1.428006	10.80288	6.3426
128	6/14/02	overburden	S1068 B-2 OB #3	27.4	5.28	3.1	2.49	0.86	0.31	1.14	2.8	1.428005602	20.29	3.4	1.830027	15.38592	7.99986
129	6/14/02	overburden	S1069 B-2 OB #4	27.4	7.52	3.91	1.14	1.09	2.26	1.47	3.4	1.830027322	15.97	3.78	1.378006	0.04092	5.74926
130	6/14/02	overburden	S1070 B-2 OB QC	26.2	0.02	2.81	1.6	0.83	2.18	1.1	3.78	1.378005806	14.96	-0.03	1.340336	2.12784	5.36052
131	6/17/02	background	bkg061702	7.5	1.04	2.62	-0.29	0.78	0.26	1.09	-0.03	1.340335779	17.54	7.98	1.620031	-1.39128	6.87456
132	6/17/02	soil standard	soilstd061702	36.9	-0.68	3.36	4.49	0.98	3.49	1.29	7.98	1.620030864	14.91	4.08	1.356024	7.3656	5.89248
133	6/17/02	exclusion zone	S1071 D-6.5	37.3	3.6	2.88	2.27	0.82	1.81	1.08	4.08	1.356023599	10.53	3.18	0.984073	8.22492	4.27614
134	6/17/02	EPA Special	Batch#4 Sample#1 7D	27	4.02	2.09	1.8	0.6	1.38	0.78	3.18	0.984073168	11.39	3.1	0.942019	-0.69564	3.9897
135	6/17/02	EPA Special	Batch#4 Sample#2 7D	28.9	-0.34	1.95	1.54	0.57	1.56	0.75	3.1	0.942019108	12.96	3.38	1.114002	6.73134	4.82856
136	6/17/02	EPA Special	Batch#4 Sample#3 7D	29.2	3.29	2.36	1.57	0.67	1.81	0.89	3.38	1.114001795	11.51	3.91	1.036002	6.97686	4.37844
137	6/17/02	EPA Special	Batch#4 Sample#4 7D	27.7	3.41	2.14	1.33	0.62	2.58	0.83	3.91	1.036001931	9.48	3.79	0.838153	3.43728	3.53958
138	6/17/02	EPA Special	Batch#4 Sample#5 7D	29.6	1.68	1.73	1.39	0.49	2.4	0.68	3.79	0.838152731	10.17	4.84	0.980051	7.7748	4.21476
139	6/17/02	EPA Special	Batch#5 Sample#1 7D	23.5	3.8	2.06	1.71	0.58	3.13	0.79	4.84	0.980051019	11.59	4.5	0.970052	-1.55496	4.11246
140	6/17/02	EPA Special	Batch#5 Sample#2 7D	22.9	-0.76	2.01	2.56	0.59	1.94	0.77	4.5	0.970051545	12.04	4.19	1.074477	7.161	4.8081
141	6/17/02	EPA Special	Batch#5 Sample#3 7D	21.2	3.5	2.35	3.65	0.67	0.54	0.84	4.19	1.074476617	11.96	3.39	0.976166	2.046	4.23522
142	6/17/02	EPA Special	Batch#5 Sample#4 7D	21.1	1	2.07	2.09	0.6	1.3	0.77	3.39	0.976165969	10.13	5.42	0.886002	2.51658	3.76464

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Complete File of Nutranl Samples																				
Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium								
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty								
143	6/17/02	EPA Special	Batch#5 Sample#5 7D	21.8	1.23	1.84	2.38	0.53	3.04	0.71	5.42	0.886002257	72.64	192.77	9.728248	-16.2657	45.48258			
144	6/17/02	EPA Special	Batch#6 Sample#1 7D	24.5	-7.95	22.23	138.27	6.22	54.5	7.48	192.77	9.72824753	44.36	148.95	5.932099	-15.1813	27.9892			
145	6/17/02	EPA Special	Batch#6 Sample#2 7D	24.4	-7.42	13.68	113.88	3.83	35.07	4.53	148.95	5.932099123	56.39	169.45	7.298109	2.74164	34.35234			
146	6/17/02	EPA Special	Batch#6 Sample#3 7D	25.2	1.34	16.79	123.33	4.68	46.12	5.6	169.45	7.298109344	62.66	172.47	8.570793	39.16044	40.63356			
147	6/17/02	EPA Special	Batch#6 Sample#4 7D	24.9	19.14	19.86	122.02	5.48	50.45	6.59	172.47	8.570793429	70.6	179.9	9.305848	-4.31706	43.23198			
148	6/17/02	EPA Special	Batch#6 Sample#5 7D	23.6	-2.11	21.13	121.78	5.92	58.12	7.18	179.9	9.305847624	13	4.33	1.25	3.35544	5.34006			
149	6/17/02	Pre EPA	B-D/2-6 Pre EPA#1	33.2	1.64	2.61	1.76	0.75	2.57	1	4.33	1.25	12.55	6.91	1.152562	1.4322	5.115			
150	6/17/02	Pre EPA	B-D/2-6 Pre EPA#2	35	0.7	2.5	5.64	0.72	1.27	0.9	6.91	1.152562363	17.59	5.09	1.74201	9.0024	7.5702			
151	6/17/02	Pre EPA	B-D/2-6 Pre EPA#3	33	4.4	3.7	2.23	1.05	2.86	1.39	5.09	1.742010333	11.77	6.64	1.062121	2.41428	4.54212			
152	6/17/02	Pre EPA	B-D/2-6 Pre EPA#4	34.1	1.18	2.22	3.37	0.65	3.27	0.84	6.64	1.06212052	12.7	-0.42	0.968349	-0.75702	4.07154			
153	6/18/02	background	bkg061802	20	-0.37	1.99	-0.31	0.56	-0.11	0.79	-0.42	0.968349111	16.18	7.69	1.438402	5.48328	6.21984			
154	6/18/02	soil standard	soilstd061802	36.9	2.68	3.04	3.77	0.89	3.92	1.13	7.69	1.438401891	140.06	634.08	21.04373	-523.919	100.8064			
155	6/18/02	exclusion zone	S1076 C-5-9-2	29.3	-256.07	49.27	600.79	13.99	33.29	15.72	634.08	21.04372828	571.97	1357.44	86.12394	-1359.49	384.1774			
156	6/18/02	exclusion zone	S1077 D-9-8	43	-664.46	187.77	945.81	54.63	411.63	66.58	1357.44	86.1239415	29.64	55.6	3.564323	-24.6952	14.75166			
157	6/18/02	exclusion zone	S1078 D-9-6	35	-12.07	7.21	17.99	2.1	37.61	2.88	55.6	3.564323218	10.06	5.2	0.89202	1.04346	3.80556			
158	6/18/02	EPA	S1079 B-C/2-6 EPA #1	27.7	0.51	1.86	2.79	0.54	2.41	0.71	5.2	0.892020179	14.43	4.53	1.280039	11.19162	5.48328			
159	6/18/02	EPA	S1080 B-C/2-6 EPA #2	26.8	5.47	2.68	1.42	0.76	3.11	1.03	4.53	1.280039062	12.24	5.27	1.084066	8.92056	4.68534			
160	6/18/02	EPA	S1081 B-C/2-6 EPA #3	28.5	4.36	2.29	2.58	0.66	2.69	0.86	5.27	1.084066419	10.22	4.7	0.85	13.03302	3.74418			
161	6/18/02	EPA	S1082 B-C/2-6 EPA #4	27.5	6.37	1.83	1.57	0.51	3.13	0.68	4.7	0.85	13.34	5.99	1.208015	11.84634	5.23776			
162	6/18/02	EPA	S1083 B-C/2-6 EPA #5	27.6	5.79	2.56	1.83	0.72</												

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Complete File of NutraNl Samples																	
Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
170	6/18/02	EPA Special	Batch#7 Sample#3 7D	30.9	0.82	2.49	3.42	0.73	3.69	0.95	7.11	1.1980818	13.46	6.6	1.202539	10.08678	5.27868
171	6/18/02	EPA Special	Batch#7 Sample#4 7D	29	4.93	2.58	3.74	0.75	2.86	0.94	6.6	1.202538981	12.15	5.93	1.178007	10.86426	5.115
172	6/18/02	EPA Special	Batch#7 Sample#5 7D	29.1	5.31	2.5	2.56	0.71	3.37	0.94	5.93	1.178006791	18.66	34.62	2.091172	-8.10216	9.35022
173	6/18/02	EPA Special	Batch#8 Sample#1 7D	30.7	-3.96	4.57	22.14	1.31	12.48	1.63	34.62	2.09117192	18.34	36.96	2.084922	-16.9	9.12516
174	6/18/02	EPA Special	Batch#8 Sample#2 7D	31.8	-8.26	4.46	22.61	1.3	14.35	1.63	36.96	2.084922061	17.63	37.72	2.114639	8.9001	9.43206
175	6/18/02	EPA Special	Batch#8 Sample#3 7D	32.5	4.35	4.61	21.43	1.31	16.29	1.66	37.72	2.114639449	22.03	35.89	2.553449	-6.66996	11.37576
176	6/18/02	EPA Special	Batch#8 Sample#4 7D	32.1	-3.26	5.56	21.86	1.6	14.03	1.99	35.89	2.553448648	17.18	33.98	1.878776	3.60096	8.42952
177	6/18/02	EPA Special	Sample#5 7D	31.3	1.76	4.12	20.24	1.17	13.74	1.47	33.98	1.878776197	12.07	-0.35	0.958019	-3.35544	3.7851
178	6/19/02	background	bkg061902	7.5	-1.64	1.85	0	0.57	-0.35	0.77	-0.35	0.958018789	12.4	8.44	1.16211	4.52166	5.05362
179	6/19/02	soil standard	soilstd061902	36.9	2.21	2.47	5.02	0.71	3.42	0.92	8.44	1.16211015	17.38	1.96	1.604151	8.16354	6.87456
180	6/19/02	overburden	S1089 F-25 OB #1	31.4	3.99	3.36	1.06	0.98	0.9	1.27	1.96	1.604150866	15.3	2.03	1.172007	-9.9231	4.9104
181	6/19/02	overburden	S1090 F-25 OB #2	30.7	-4.85	2.4	1.42	0.7	0.61	0.94	2.03	1.172006826	14.55	2.86	1.35	4.48074	5.74926
182	6/19/02	overburden	S1091 F-25 OB #3	31.5	2.19	2.81	1.28	0.81	1.58	1.08	2.86	1.35	13.66	1.28	1.142016	3.08946	4.86948
183	6/19/02	overburden	S1092 F-25 OB #4	29.6	1.51	2.38	1.09	0.69	0.19	0.91	1.28	1.142015762	10.31	1.51	0.852115	3.72372	3.62142
184	6/19/02	overburden	S1093 F-25 OB #5	28.8	1.82	1.77	0.25	0.5	1.26	0.69	1.51	0.852115016	16.97	1.22	1.388092	-0.77748	5.56512
185	6/19/02	overburden	S1094 F-25 OB QC	27.8	-0.38	2.72	-0.04	0.82	1.26	1.12	1.22	1.388092216	15.2	14.15	1.578924	-0.6138	7.03824
186	6/19/02	EPA Special	Batch#9 Sample#1 7D	32.3	-0.3	3.44	9.15	0.99	5	1.23	14.15	1.578923684	17.45	9.71	1.708567	5.5242	7.44744
187	6/19/02	EPA Special	Batch#9 Sample#2 7D	32.8	2.7	3.64	5.1	1.06	4.61	1.34	9.71	1.708566651	13.97	10.88	1.352479	13.44222	6.11754
188	6/19/02	EPA Special	Batch#9 Sample#3 7D	33.9	6.57	2.99	6.91	0.84	3.97	1.06	10.88	1.352479205	14	11.17	1.354179	10.18908	6.01524
189	6/19/02	EPA Special	Batch#9 Sample#4 7D	32.1	4.98	2.94	6.22	0.83	4.95	1.07	11.17	1.354178718	18.99	11.85	1.899079	3.19176	8.42952
190	6/19/02	EPA Special	Batch#9 Sample#5 7D	36.5	1.56	4.12	7.27	1.19	4.58	1.48	11.85	1.899078724	1635.57	3468.64	231.656	-3227.5	1022.795
191	6/19/02	exclusion zone	S1095 D.8-9.5	34.1	-1577.47	499.9	2140.03	145.03	1328.61	180.64	3468.64	231.6560176	15.78	0.65	1.470544	-3.74418	5.54466
192	6/20/02	background	bkg062002	7.5	-1.83	2.71	-0.91	0.85	1.56	1.2	0.65	1.470544117	18.1	8.29	1.814745	-2.2506	7.89756
193	6/20/02	soil standard	soilstd062002	36.9	-1.1	3.86	7.39	1.13	0.9	1.42	8.29	1.814745161	59.63	167.47	7.674406	-26.7003	34.782
194	6/20/02	EPA Special	Batch#1 Sample#1 14D	21.7	-13.05	17	102.23	4.81	65.24	5.98	167.47	7.674405514	52.45	157.23	6.804594	-11.8259	31.11966
195	6/20/02	EPA Special	Batch#1 Sample#2 14D	20.3	-5.78	15.21	98.16	4.28	59.07	5.29	157.23	6.804594036	52.33	162.68	7.181003	-47.4058	32.49048
196	6/20/02	EPA Special	Batch#1 Sample#3 14D	21.6	-23.17	15.88	104.41	4.52	58.27	5.58	162.68	7.181002715	39.41	108.06	5.308352	-7.09962	24.06096
197	6/20/02	EPA Special	Batch#1 Sample#4 14D	21.9	-3.47	11.76	64.16	3.31	43.9	4.15	108.06	5.30835191	74.59	206.34	10.14038	-57.6358	45.5235

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
			Batch#1														
198	6/20/02	EPA Special	Sample#5 14D	21.5	-28.17	22.25	119.51	6.32	86.83	7.93	206.34	10.14037968	18.68	26.07	2.525332	-14.1788	11.1507
199	6/20/02	exclusion zone	S1096 E.7-5 2	25.8	-6.93	5.45	18.68	1.58	7.39	1.97	26.07	2.525331661	25.8	22.69	2.713098	-3.10992	12.84888
200	6/20/02	exclusion zone	S1097 F.5-3.5	18.9	-1.52	6.28	22.92	1.8	-0.23	2.03	22.69	2.71309786	34.74	115.39	5.036715	-25.7182	24.42924
201	6/20/02	exclusion zone	S1098 E.5-3.5	16.5	-12.57	11.94	109.24	3.34	6.15	3.77	115.39	5.036715199	19.1	14.17	2.05	10.23	9.57528
202	6/20/02	exclusion zone	S1099 F-5.5	22.3	5	4.68	13.03	1.33	1.14	1.56	14.17	2.05	18.54	26.48	2.128685	14.38338	9.63666
203	6/20/02	exclusion zone	S1100 F-6.2	29.8	7.03	4.71	15.8	1.32	10.68	1.67	26.48	2.12868504	15.82	0.61	1.358013	-12.9716	4.99224
204	6/21/02	background	bkg062102	7.5	-6.34	2.44	0.8	0.81	-0.19	1.09	0.61	1.358013255	17.5	8.06	1.596246	3.25314	7.07916
205	6/21/02	soil standard	soilstd062102	36.9	1.59	3.46	4.68	0.98	3.38	1.26	8.06	1.596245595	15.39	5.4	1.318218	4.03062	5.7288
			Batch#2														
206	6/21/02	EPA Special	Sample#1 14D	27.8	1.97	2.8	2.92	0.81	2.48	1.04	5.4	1.318218495	12.81	7.81	1.168247	-10.6392	4.88994
			Batch#2														
207	6/21/02	EPA Special	Sample#2 14D	27.8	-5.2	2.39	5.03	0.72	2.78	0.92	7.81	1.168246549	9.99	6.36	0.884081	-6.11754	3.6828
			Batch#2														
208	6/21/02	EPA Special	Sample#3 14D	27.2	-2.99	1.8	3.47	0.54	2.89	0.7	6.36	0.884081444	13.71	5.71	1.322006	-0.36828	5.56512
			Batch#2														
209	6/21/02	EPA Special	Sample#4 14D	26.7	-0.18	2.72	2.87	0.79	2.84	1.06	5.71	1.322006051	9.17	6.29	0.89202	7.42698	3.80556
			Batch#2														
210	6/21/02	EPA Special	Sample#5 14D	28.5	3.63	1.86	3.35	0.54	2.94	0.71	6.29	0.892020179	14.76	2.83	1.240161	3.25314	5.36052
			Batch#3														
211	6/21/02	EPA Special	Sample#1 14D	28.3	1.59	2.62	2.38	0.76	0.45	0.98	2.83	1.24016128	13.92	2.98	1.208015	2.78256	5.15592
			Batch#3														
212	6/21/02	EPA Special	Sample#2 14D	28	1.36	2.52	1.49	0.72	1.49	0.97	2.98	1.208014901	10.99	3.33	0.920054	-0.77748	3.8874
			Batch#3														
213	6/21/02	EPA Special	Sample#3 14D	27	-0.38	1.9	2.2	0.56	1.13	0.73	3.33	0.920054346	13.47	2.81	1.128007	6.50628	4.76718
			Batch#3														
214	6/21/02	EPA Special	Sample#4 14D	28.6	3.18	2.33	0.37	0.68	2.44	0.9	2.81	1.128007092	8.98	3.45	0.8	3.82602	3.41682
			Batch#3														
215	6/21/02	EPA Special	Sample#5 14D	28.9	1.87	1.67	1.53	0.48	1.92	0.64	3.45	0.8	12.64	2.87	1.1	1.2276	4.58304
216	6/21/02	Pre EPA	B-C/6-9	24.4	0.6	2.24	1.8	0.66	1.07	0.88	2.87	1.1	9.76	2.38	0.79404	2.51658	3.35544
217	6/21/02	Pre EPA	D-E/6-9	23.8	1.23	1.64	0.33	0.47	2.05	0.64	2.38	0.794040301	13.17	3.22	1.156028	3.41682	4.95132
218	6/21/02	Pre EPA	D-E/2-6	21.5	1.67	2.42	2.02	0.7	1.2	0.92	3.22	1.156027681	7.87	3.93	0.716101	2.5575	2.9667
219	6/21/02	Pre EPA	C-D/2-6	25.3	1.25	1.45	0.87	0.42	3.06	0.58	3.93	0.716100552	10.26	2.08	0.814002	-2.06646	3.4782
220	6/21/02	Pre EPA	C-D/6-9	25.4	-1.01	1.7	1.55	0.49	0.53	0.65	2.08	0.814002457	89.95	269.2	12.21856	-165.01	56.3673
221	6/21/02	exclusion zone	S1106 D-10	19	-80.65	27.55	207.66	7.83	61.54	9.38	269.2	12.21856375	19.72	18.95	2.127087	10.41414	9.5139
222	6/21/02	exclusion zone	S1107 E.5-10	25.2	5.09	4.65	11.5	1.33	7.45	1.66	18.95	2.12708721	14.31	-0.49	1.11252	-0.59334	4.7058
223	6/24/02	background	bkg062402	7.5	-0.29	2.3	-0.58	0.64	0.09	0.91	-0.49	1.112519663	15.05	8.41	1.338432	-2.8644	5.79018
224	6/24/02	soil standard	soilstd062402	36.9	-1.4	2.83	5.51	0.83	2.9	1.05	8.41	1.338431918	12.31	3.68	1.072007	6.6495	4.6035
			Batch#4														
225	6/24/02	EPA Special	Sample#1 14D	27	3.25	2.25	1.28	0.64	2.4	0.86	3.68	1.072007463	10.89	3.69	0.922009	9.57528	3.96924
			Batch#4														
226	6/24/02	EPA Special	Sample#2 14D	28.9	4.68	1.94	1.14	0.55	2.55	0.74	3.69	0.922008677	10.6	3.72	0.894036	-0.12276	3.7851
			Batch#4														
227	6/24/02	EPA Special	Sample#3 14D	29.2	-0.06	1.85	1.33	0.53	2.39	0.72	3.72	0.894035793	11.73	3.41	0.966075	-1.88232	3.94878
			Batch#4														
228	6/24/02	EPA Special	Sample#4 14D	27.7	-0.92	1.93	1.15	0.57	2.26	0.78	3.41	0.966074531	8.13	4.26	0.722011	6.30168	3.04854

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
229	6/24/02	EPA Special	Batch#4 Sample#5 14D	29.6	3.08	1.49	1.19	0.43	3.07	0.58	4.26	0.72201108	11.9	5.06	1.048094	8.61366	4.58304
230	6/24/02	EPA Special	Batch#5 Sample#1 14D	23.5	4.21	2.24	2.87	0.64	2.19	0.83	5.06	1.048093507	11.57	6.26	1.05603	-1.45266	4.43982
231	6/24/02	EPA Special	Batch#5 Sample#2 14D	22.9	-0.71	2.17	2.57	0.64	3.69	0.84	6.26	1.056030303	10.82	4.42	0.914002	-1.37082	3.84648
232	6/24/02	EPA Special	Batch#5 Sample#3 14D	21.2	-0.67	1.88	2.52	0.55	1.9	0.73	4.42	0.914002188	13.38	5.26	1.126144	-5.07408	4.64442
233	6/24/02	EPA Special	Batch#5 Sample#4 14D	21.1	-2.48	2.27	2.82	0.69	2.44	0.89	5.26	1.126143863	12.42	4.96	1.06827	-3.70326	4.48074
234	6/24/02	EPA Special	Batch#5 Sample#5 14D	21.8	-1.81	2.19	3.05	0.66	1.91	0.84	4.96	1.068269629	30.17	201.12	4.115349	-56.2445	18.74136
235	6/24/02	EPA Special	Batch#6 Sample#1 14D	24.5	-27.49	9.16	136.77	2.6	64.35	3.19	201.12	4.115349317	18.43	166.25	2.572353	-61.9529	11.70312
236	6/24/02	EPA Special	Batch#6 Sample#2 14D	24.4	-30.28	5.72	116.79	1.63	49.46	1.99	166.25	2.572353008	44.37	184.21	5.855339	-44.521	26.76168
237	6/24/02	EPA Special	Batch#6 Sample#3 14D	25.2	-21.76	13.08	127.9	3.71	56.31	4.53	184.21	5.855339444	29.08	176.3	4.080907	-37.9942	18.55722
238	6/24/02	EPA Special	Batch#6 Sample#4 14D	24.9	-18.57	9.07	117.39	2.57	58.91	3.17	176.3	4.080906762	30.22	180.59	4.00431	-92.1723	17.86158
239	6/24/02	EPA Special	Batch#6 Sample#5 14D	23.6	-45.05	8.73	116.85	2.51	63.74	3.12	180.59	4.004310178	11.1	3.43	0.952103	-3.31452	3.82602
240	6/24/02	EPA	S1108 D-E/6-9 EPA#1	26.9	-1.62	1.87	1.17	0.56	2.26	0.77	3.43	0.952102936	11.4	3.02	0.95	1.10484	4.11246
241	6/24/02	EPA	S1109 D-E/6-9 EPA#2	27.6	0.54	2.01	2.18	0.57	0.84	0.76	3.02	0.95	9.49	2.96	0.770065	-2.16876	3.23268
242	6/24/02	EPA	S1110 D-E/6-9 EPA#3	25.6	-1.06	1.58	1.86	0.47	1.1	0.61	2.96	0.770064932	11.81	3.84	0.994032	-11.2735	3.86694
243	6/24/02	EPA	S1111 D-E/6-9 EPA#4	26.3	-5.51	1.89	1.33	0.59	2.51	0.8	3.84	0.994032193	11.92	1.92	0.956033	7.30422	4.25568
244	6/24/02	EPA	S1112 D-E/6-9 EPA#5	26.5	3.57	2.08	1.85	0.58	0.07	0.76	1.92	0.956033472	14.8	4.68	1.336001	-5.9334	5.38098
245	6/24/02	EPA	S1113 C-D/6-9 EPA#1	28.7	-2.9	2.63	1.67	0.8	3.01	1.07	4.68	1.336001497	16.54	2.33	1.348073	-1.04346	5.60604
246	6/24/02	EPA	S1114 C-D/6-9 EPA#2	28.6	-0.51	2.74	1.29	0.82	1.04	1.07	2.33	1.348072698	9.08	3.39	0.77201	-2.08692	3.23268
247	6/24/02	EPA	S1115 C-D/6-9 EPA#3	28.5	-1.02	1.58	1.1	0.46	2.29	0.62	3.39	0.772010363	12.46	2.73	1.002098	-2.61888	4.17384
248	6/24/02	EPA	S1116 C-D/6-9 EPA#4	27	-1.28	2.04	0.74	0.59	1.99	0.81	2.73	1.0020978	14.43	13.58	1.540292	-1.69818	6.91548
250	6/24/02	EPA	S1118 C-D/2-6 EPA#1	31.5	0.5	1.62	2.19	0.48	2.23	0.64	4.42	0.8	8.25	4.42	0.8	1.023	3.31452
251	6/24/02	EPA	S1119 C-D/2-6 EPA#2	31.5	3.4	1.9	1.46	0.53	1.7	0.7	3.16	0.878009112	11.01	3.16	0.878009	6.9564	3.8874
252	6/24/02	EPA	S1120 C-D/2-6 EPA#3	31.5	1.85	2.21	2	0.64	0.84	0.81	2.84	1.032327467	12.34	2.84	1.032327	3.7851	4.52166
253	6/24/02	EPA	S1121 C-D/2-6 EPA#4	30.1	2.95	2.31	2.06	0.66	1.36	0.88	3.42	1.1	12.13	3.42	1.1	6.0357	4.72626
254	6/24/02	EPA	S1122 C-D/2-6 EPA#5	30	0.51	1.71	2.58	0.5	1.21	0.64	3.79	0.81215762	9.75	3.79	0.812158	1.04346	3.49866
255	6/25/02	background	bkg062502	7.5	1.23	1.99	-0.18	0.58	-0.05	0.8	-0.23	0.988129546	13.13	-0.23	0.98813	2.51658	4.07154
256	6/25/02	soil standard	soilstd062502	36.9	-1.98	4.02	5.63	1.2	3.41	1.51	9.04	1.928756076	21	9.04	1.928756	-4.05108	8.22492

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
257	6/25/02	EPA	S1123 B-C/6-9 EPA#1	31.3	-3.14	2.14	1.71	0.64	1.88	0.84	3.59	1.056030303	12.72	3.59	1.05603	-6.42444	4.37844
258	6/25/02	EPA	S1124 B-C/6-9 EPA#2	31.8	1.65	2.09	1.75	0.6	2.08	0.79	3.83	0.992018145	11.46	3.83	0.992018	3.3759	4.27614
259	6/25/02	EPA	S1125 B-C/6-9 EPA#3	32.7	2.84	1.67	-0.09	0.47	3.41	0.66	3.32	0.810246876	10.05	3.32	0.810247	5.81064	3.41682
260	6/25/02	EPA	S1126 B-C/6-9 EPA#4	32.9	0.13	1.92	1.16	0.55	0.4	0.71	1.56	0.898109125	11.7	1.56	0.898109	0.26598	3.92832
261	6/25/02	EPA	S1127 B-C/6-9 EPA#5	32.7	-1.97	2.1	2.27	0.61	1	0.79	3.27	0.998098192	12.43	3.27	0.998098	-4.03062	4.2966
249	6/24/02	EPA	S1117 C-D/6-9 EPA#5	28.3	-0.83	3.38	12.39	0.99	1.19	1.18	13.58	1.54029218	11.1	3.71	0.914002	-3.64188	3.80556
262	6/25/02	EPA	S1128 D-E/2-6 EPA#1	31.6	-1.78	1.86	1.05	0.55	2.66	0.73	3.71	0.914002188	12.88	2.77	1.064002	-0.98208	4.48074
263	6/25/02	EPA	S1129 D-E/2-6 EPA#2	30.6	-0.48	2.19	0.83	0.64	1.94	0.85	2.77	1.06400188	12.72	2.76	1.166062	12.33738	5.09454
264	6/25/02	EPA	S1130 D-E/2-6 EPA#3	30.6	6.03	2.49	0.76	0.69	2	0.94	2.76	1.166061748	12.87	2.98	1.144028	6.9564	4.86948
265	6/25/02	EPA	S1131 D-E/2-6 EPA#4	31.7	3.4	2.38	0.97	0.68	2.01	0.92	2.98	1.144027972	10.03	6.26	0.948103	2.23014	4.07154
266	6/25/02	EPA	S1132 D-E/2-6 EPA#5	31.2	1.09	1.99	3.47	0.58	2.79	0.75	6.26	0.94810337	15.66	20.88	1.799139	0.26598	8.02032
267	6/25/02	exclusion zone	S1133 C-16 Batch#7	30.6	0.13	3.92	14.92	1.13	5.96	1.4	20.88	1.799138683	11.07	6.78	1.05603	3.90786	4.56258
268	6/25/02	EPA Special	Sample#1 14D Batch#7	29.8	1.91	2.23	3.8	0.64	2.98	0.84	6.78	1.056030303	10.08	6.68	0.90802	0.6138	3.7851
269	6/25/02	EPA Special	Sample#2 14D Batch#7	28.6	0.3	1.85	2.33	0.54	4.35	0.73	6.68	0.908019824	10.2	7.28	0.978008	6.3426	4.17384
270	6/25/02	EPA Special	Sample#3 14D Batch#7	30.9	3.1	2.04	3.02	0.59	4.26	0.78	7.28	0.97800818	12.51	7.78	1.146342	3.31452	5.05362
271	6/25/02	EPA Special	Sample#4 14D Batch#7	29	1.62	2.47	5.04	0.71	2.74	0.9	7.78	1.146342008	10.21	5.64	0.942019	6.71088	4.07154
272	6/25/02	EPA Special	Sample#5 14D Batch#8	29.1	3.28	1.99	2.97	0.57	2.67	0.75	5.64	0.942019108	19.9	32.34	2.167787	9.75942	9.8208
273	6/25/02	EPA Special	Sample#1 14D Batch#8	30.7	4.77	4.8	20.4	1.37	11.94	1.68	32.34	2.16778689	17.84	37.75	2.144411	6.26076	9.47298
274	6/25/02	EPA Special	Sample#2 14D Batch#8	31.8	3.06	4.63	20.06	1.32	17.69	1.69	37.75	2.144411341	17.73	39.15	2.078702	-4.6035	9.24792
275	6/25/02	EPA Special	Sample#3 14D Batch#8	32.5	-2.25	4.52	23.81	1.29	15.34	1.63	39.15	2.078701518	16.82	37.22	2.122499	14.5266	9.59574
276	6/25/02	EPA Special	Sample#4 14D Batch#8	32.1	7.1	4.69	22.03	1.31	15.19	1.67	37.22	2.122498528	15.6	34.88	1.828797	13.27854	8.24538
277	6/25/02	EPA Special	Sample#5 14D	31.3	6.49	4.03	20.39	1.14	14.49	1.43	34.88	1.828797419	35.28	51.65	4.208004	25.14534	18.59814
278	6/25/02	exclusion zone	S1134 E.5-10.5	27	12.29	9.09	21.53	2.52	30.12	3.37	51.65	4.208004278	18.57	5.68	1.846212	12.54198	8.14308
279	6/25/02	exclusion zone	S1135 E.5-11.2	32.6	6.13	3.98	3.23	1.13	2.45	1.46	5.68	1.846212339	19.13	7.54	1.768163	3.90786	7.63158
280	6/25/02	exclusion zone	S1136 E.5-11.5	29	1.91	3.73	4.15	1.08	3.39	1.4	7.54	1.768162888	17.32	23.16	2.004121	7.22238	8.71596
281	6/25/02	exclusion zone	S1137 E-11	34.5	3.53	4.26	11.77	1.22	11.39	1.59	23.16	2.004120755	15.24	-1.06	1.122007	3.33498	4.78764
282	6/26/02	background	bkg062602	7.5	1.63	2.34	-0.25	0.67	-0.81	0.9	-1.06	1.12200713	20.96	7.65	2.044431	-8.3886	8.5932

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
283	6/26/02	soil standard	soilstd062602	36.9	-4.1	4.2	5.22	1.26	2.43	1.61	7.65	2.044431461	13.82	13.91	1.485295	2.7621	6.69042
284	6/26/02	EPA Special	Batch#9 Sample#1 14D	32.3	1.35	3.27	10.58	0.94	3.33	1.15	13.91	1.485294584	13.84	9.5	1.254193	8.0817	5.46282
285	6/26/02	EPA Special	Batch#9 Sample#2 14D	32.8	3.95	2.67	4.98	0.77	4.52	0.99	9.5	1.254192968	16.27	10.62	1.596246	18.53676	7.2633
286	6/26/02	EPA Special	Batch#9 Sample#3 14D	33.9	9.06	3.55	5.65	0.98	4.97	1.26	10.62	1.596245595	14.49	11.09	1.466492	-14.9358	6.17892
287	6/26/02	EPA Special	Batch#9 Sample#4 14D	32.1	-7.3	3.02	7.62	0.91	3.47	1.15	11.09	1.466492414	14.34	13.15	1.432236	14.9358	6.48582
288	6/26/02	EPA Special	Batch#9 Sample#5 14D	36.5	7.3	3.17	6.96	0.88	6.19	1.13	13.15	1.432236014	22.28	21.55	2.359873	14.60844	10.80288
289	6/26/02	exclusion zone	S1138 E-12 S1139 C-14	34.7	7.14	5.28	13.72	1.49	7.83	1.83	21.55	2.359872878	19.03	3.95	1.582214	10.80288	7.12008
290	6/26/02	overburden	OB#1 S1140 C-14	37.1	5.28	3.48	2.16	0.97	1.79	1.25	3.95	1.582213639	11.87	3.85	1.036002	-5.19684	4.21476
291	6/26/02	overburden	OB#2 S1141 C-14	38	-2.54	2.06	1.44	0.62	2.41	0.83	3.85	1.036001931	14.88	5.57	1.39807	15.81558	6.32214
292	6/26/02	overburden	OB#3 S1142 C-14	35.3	7.73	3.09	3.51	0.85	2.06	1.11	5.57	1.398070098	14.34	1.84	1.132254	9.39114	4.88994
293	6/26/02	overburden	OB#4 S1143 C-14 OB	36.8	4.59	2.39	-0.09	0.66	1.93	0.92	1.84	1.132254388	14.15	2.87	1.238103	7.2633	5.15592
294	6/26/02	overburden	QC	36.8	3.55	2.52	0.73	0.73	2.14	1	2.87	1.238103388	14.62	-1.31	1.048618	2.33244	4.35798
295	6/27/02	background	bkg062702	7.5	1.14	2.13	-1.58	0.6	0.27	0.86	-1.31	1.048618138	18.04	8.74	1.708567	-13.6264	7.22238
296	6/27/02	soil standard	soilstd062702	36.9	-6.66	3.53	6.82	1.06	1.92	1.34	8.74	1.708566651	55.18	160.53	7.244929	22.79244	33.02244
297	6/27/02	EPA Special	Batch#1 Sample#1 21D	21.7	11.14	16.14	91.94	4.51	68.59	5.67	160.53	7.244929261	43.23	160.66	5.761267	-62.9554	25.94328
298	6/27/02	EPA Special	Batch#1 Sample#2 21D	20.3	-30.77	12.68	102.23	3.61	58.43	4.49	160.66	5.761267222	61.58	176.04	8.206985	-14.0969	37.3395
299	6/27/02	EPA Special	Batch#1 Sample#3 21D	21.6	-6.89	18.25	109.36	5.15	66.68	6.39	176.04	8.20698483	30.66	107.48	3.884044	-22.4651	17.43192
300	6/27/02	EPA Special	Batch#1 Sample#4 21D	21.9	-10.98	8.52	65.65	2.43	41.83	3.03	107.48	3.884044284	57.7	209.92	8.09921	-14.5471	36.7257
301	6/27/02	EPA Special	Batch#1 Sample#5 21D	21.5	-7.11	17.95	123.5	5.04	86.42	6.34	209.92	8.099209838	22.63	40.83	2.816256	-5.0127	12.25554
302	6/27/02	exclusion zone	S1144 E-12	30.3	-2.45	5.99	20.73	1.72	20.1	2.23	40.83	2.81625638	24.61	44.4	2.660169	-8.02032	11.51898
303	6/27/02	exclusion zone	S1145 E-12 S1146 B-19	27.8	-3.92	5.63	19.54	1.62	24.86	2.11	44.4	2.660169168	20	2.79	1.690266	3.96924	7.24284
304	6/27/02	overburden	OB#1 S1147 B-19	26.4	1.94	3.54	0.41	0.99	2.38	1.37	2.79	1.690266251	13.42	0.76	0.980051	2.98716	4.27614
305	6/27/02	overburden	OB#2 S1148 B-19	24.9	1.46	2.09	-0.02	0.58	0.78	0.79	0.76	0.980051019	19.09	2.77	1.448068	-11.3758	5.87202
306	6/27/02	overburden	OB#3 S1149 B-19 OB	27.2	-5.56	2.87	1.6	0.88	1.17	1.15	2.77	1.448067678	17.14	1.5	1.286002	-2.12784	5.23776
307	6/27/02	overburden	QC S1150 C-20	25.8	-1.04	2.56	0.68	0.77	0.82	1.03	1.5	1.286001555	11.02	4.03	0.952103	-2.12784	3.92832
308	6/27/02	overburden	OB#1 S1151 C-20	27.7	-1.04	1.92	1.52	0.56	2.51	0.77	4.03	0.952102936	15.34	2.48	1.34618	-5.29914	5.4219
309	6/27/02	overburden	OB#2 S1152 C-20	29.4	-2.59	2.65	0.67	0.79	1.81	1.09	2.48	1.34617978	19.12	4.64	1.696231	-11.5804	6.69042
310	6/27/02	overburden	OB#3	27.9	-5.66	3.27	3.01	1.04	1.63	1.34	4.64	1.696231116	16.82	4.01	1.596152	-12.542	5.99478

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
			S1153 C-20 OB														
311	6/27/02	overburden	QC	22.6	-6.13	2.93	1.47	0.94	2.54	1.29	4.01	1.596151622	15.35	-0.5	1.242014	7.73388	5.3196
312	6/28/02	background	bkg062802	7.5	3.78	2.6	0.05	0.75	-0.55	0.99	-0.5	1.242014493	14.47	8.47	1.538376	-2.6598	6.42444
313	6/28/02	soil standard	soilstd062802	36.9	-1.3	3.14	5.89	0.95	2.58	1.21	8.47	1.538375767	9.67	6.37	0.942019	10.08678	4.05108
			Batch#2														
314	6/28/02	EPA Special	Sample#1 21D	27.8	4.93	1.98	2.95	0.57	3.42	0.75	6.37	0.942019108	9.1	8.26	0.882383	-5.07408	3.80556
			Batch#2														
315	6/28/02	EPA Special	Sample#2 21D	27.8	-2.48	1.86	6.09	0.55	2.17	0.69	8.26	0.882383137	11.03	5.49	1.010445	2.82348	4.43982
			Batch#2														
316	6/28/02	EPA Special	Sample#3 21D	27.2	1.38	2.17	4.15	0.63	1.34	0.79	5.49	1.010445446	8.99	5.72	0.770065	4.66488	3.3759
			Batch#2														
317	6/28/02	EPA Special	Sample#4 21D	26.7	2.28	1.65	3.33	0.47	2.39	0.61	5.72	0.770064932	12.73	6.48	1.122007	6.93594	4.74672
			Batch#2														
318	6/28/02	EPA Special	Sample#5 21D	28.5	3.39	2.32	1.68	0.67	4.8	0.9	6.48	1.12200713	13.76	2.57	1.196328	-8.51136	4.88994
			Batch#3														
319	6/28/02	EPA Special	Sample#1 21D	20	-4.16	2.39	2.95	0.74	-0.38	0.94	2.57	1.196327714	11.31	3.23	0.914002	-1.78002	3.7851
			Batch#3														
320	6/28/02	EPA Special	Sample#2 21D	28	-0.87	1.85	1.03	0.55	2.2	0.73	3.23	0.914002188	10.79	4.4	1	-1.00254	4.13292
			Batch#3														
321	6/28/02	EPA Special	Sample#3 21D	27	-0.49	2.02	1.78	0.6	2.62	0.8	4.4	1	13.93	1.6	1.114002	15.8565	5.0127
			Batch#3														
322	6/28/02	EPA Special	Sample#4 21D	28.6	7.75	2.45	0.82	0.67	0.78	0.89	1.6	1.114001795	12.75	4.54	1.152085	-11.7645	4.54212
			Batch#3														
323	6/28/02	EPA Special	Sample#5 21D	28.9	-5.75	2.22	1.49	0.68	3.05	0.93	4.54	1.152085066	15.76	6.24	1.538083	0.98208	6.30168
324	6/28/02	exclusion zone	S1154 E-7	31.7	0.48	3.08	2.01	0.91	4.23	1.24	6.24	1.538083223	19.71	2.91	1.554156	-1.1253	6.73134
			S1155 D-19.5														
325	6/28/02	overburden	OB#1	30.3	-0.55	3.29	1.26	0.95	1.65	1.23	2.91	1.554155719	13.17	3.24	1.116065	-0.57288	4.66488
			S1156 D-19.5														
326	6/28/02	overburden	OB#2	30.2	-0.28	2.28	1.3	0.66	1.94	0.9	3.24	1.116064514	15.66	2.95	1.35	6.79272	5.87202
			S1157 D-19.5														
327	6/28/02	overburden	OB#3	30.1	3.32	2.87	1.3	0.81	1.65	1.08	2.95	1.35	16.15	4.91	1.340336	1.49358	5.54466
			S1158 D-19.5														
328	6/28/02	overburden	OB QC	30.7	0.73	2.71	0.79	0.78	4.12	1.09	4.91	1.340335779	23.48	37.67	2.582596	-6.40398	12.03048
329	6/28/02	exclusion zone	S1159 F-7.5	29.1	-3.13	5.88	30.71	1.67	6.96	1.97	37.67	2.582595594	12.99	-0.16	0.998649	5.44236	4.1943
330	7/1/02	background	bkg070102	7.5	2.66	2.05	-0.9	0.57	0.74	0.82	-0.16	0.998649088	16.84	9.51	1.710263	0.4092	7.3656
331	7/1/02	soil standard	soilstd070102	36.9	0.2	3.6	5.36	1.05	4.15	1.35	9.51	1.710263138	11.98	3.54	0.992018	-1.26852	4.17384
			Batch#4														
332	7/1/02	EPA Special	Sample#1 21D	27	-0.62	2.04	1.7	0.6	1.84	0.79	3.54	0.992018145	11.3	3.24	1.020049	8.85918	4.56258
			Batch#4														
333	7/1/02	EPA Special	Sample#2 21D	28.9	4.33	2.23	2.25	0.62	0.99	0.81	3.24	1.020049018	10.07	2.86	0.834086	4.78764	3.66234
			Batch#4														
334	7/1/02	EPA Special	Sample#3 21D	29.2	2.34	1.79	1.73	0.51	1.13	0.66	2.86	0.834086326	12.38	2.53	0.964002	8.32722	4.2966
			Batch#4														
335	7/1/02	EPA Special	Sample#4 21D	27.7	4.07	2.1	0.95	0.58	1.58	0.77	2.53	0.964002075	15.11	4.53	1.322006	0.34782	5.40144
			Batch#4														
336	7/1/02	EPA Special	Sample#5 21D	29.6	0.17	2.64	0.62	0.79	3.91	1.06	4.53	1.322006051	13.07	5.23	1.164002	5.85156	5.05362
			Batch#5														
337	7/1/02	EPA Special	Sample#1 21D	23.5	2.86	2.47	2.14	0.7	3.09	0.93	5.23	1.164001718	9.09	5.46	0.840238	6.58812	3.66234
			Batch#5														
338	7/1/02	EPA Special	Sample#2 21D	22.9	3.22	1.79	3.27	0.52	2.19	0.66	5.46	0.840238062	12.87	4.79	1.05	9.5139	4.62396

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
339	7/1/02	EPA Special	Batch#5 Sample#3 21D	21.2	4.65	2.26	1.62	0.63	3.17	0.84	4.79	1.05	9.81	4.47	0.942019	4.01016	4.01016
340	7/1/02	EPA Special	Batch#5 Sample#4 21D	21.1	1.96	1.96	2.83	0.57	1.64	0.75	4.47	0.942019108	11	5.26	0.928009	-2.9667	3.8874
341	7/1/02	EPA Special	Batch#5 Sample#5 21D	21.8	-1.45	1.9	2.04	0.56	3.22	0.74	5.26	0.928008621	48.37	197.09	6.532442	-37.9942	30.44448
342	7/1/02	EPA Special	Batch#6 Sample#1 21D	24.5	-18.57	14.88	140.59	4.18	56.5	5.02	197.09	6.532442116	33.46	162.8	4.564526	-69.1753	21.09426
343	7/1/02	EPA Special	Batch#6 Sample#2 21D	24.4	-33.81	10.31	121.7	2.93	41.1	3.5	162.8	4.564526262	47.67	194.46	6.458336	-40.7563	29.7693
344	7/1/02	EPA Special	Batch#6 Sample#3 21D	25.2	-19.92	14.55	135.82	4.1	58.64	4.99	194.46	6.458335699	36.65	175.2	4.851361	-0.36828	22.6083
345	7/1/02	EPA Special	Batch#6 Sample#4 21D	24.9	-0.18	11.05	122.38	3.09	52.82	3.74	175.2	4.851360634	44.14	176.63	5.796292	-57.82	26.55708
346	7/1/02	EPA Special	Sample#5 21D	23.6	-28.26	12.98	121.54	3.69	55.09	4.47	176.63	5.796291918	12.79	3.11	1.054372	5.89248	4.41936
347	7/1/02	Pre EPA	B-C/9-13	25.5	2.88	2.16	-0.35	0.61	3.46	0.86	3.11	1.054371851	11.53	1.51	0.932309	-3.31452	3.76464
348	7/1/02	Pre EPA	B-C/13-17.5	29.9	-1.62	1.84	0.31	0.54	1.2	0.76	1.51	0.932308962	13.27	3.86	1.172007	-5.13546	4.76718
349	7/1/02	Pre EPA	C-D/9-13	28.4	-2.51	2.33	1.86	0.7	2	0.94	3.86	1.172006826	11.4	3.09	0.9	1.20714	3.84648
350	7/1/02	Pre EPA	D-E/13-17.5	28.9	0.59	1.88	1.1	0.54	1.99	0.72	3.09	0.9	11.99	1.6	0.998098	0.36828	4.2966
351	7/1/02	Pre EPA	D-E/9-13	31.4	0.18	2.1	1.35	0.61	0.25	0.79	1.6	0.998098192	14.32	3.16	1.304186	12.25554	5.81064
352	7/1/02	Pre EPA	C-D/13-17.5	28.2	5.99	2.84	2.21	0.8	0.95	1.03	3.16	1.30418557	29.95	65.5	3.808215	-18.4958	17.96388
353	7/1/02	exclusion zone	S1166 F.5-8.5	31.2	-9.04	8.78	54.08	2.48	11.42	2.89	65.5	3.808214805	38.38	94.28	4.853215	-26.0456	23.46762
354	7/1/02	exclusion zone	S1167 F-8.5	28.2	-12.73	11.47	85.65	3.21	8.63	3.64	94.28	4.853215429	22.69	11.56	2.147673	-12.5829	9.75942
355	7/1/02	exclusion zone	S1168 F.5-9	29.3	-6.15	4.77	12.55	1.41	-0.99	1.62	11.56	2.147673159	13.55	-0.18	1.056835	7.8771	4.46028
356	7/2/02	background	bkg070202	7.5	3.85	2.18	-0.68	0.6	0.5	0.87	-0.18	1.056834897	14.48	7.44	1.412091	5.68788	6.15846
357	7/2/02	soil standard	soilstd070202	36.9	2.78	3.01	4.37	0.86	3.07	1.12	7.44	1.412090649	12.8	6.23	1.184061	5.91294	5.15592
358	7/2/02	EPA Special	Batch#7 Sample#1 21D	29.8	2.89	2.52	3.36	0.72	2.87	0.94	6.23	1.184060809	12.06	5.38	1.098089	12.11232	4.86948
359	7/2/02	EPA Special	Batch#7 Sample#2 21D	28.6	5.92	2.38	3.03	0.67	2.35	0.87	5.38	1.09808925	13.12	7.15	1.242014	-7.99986	5.09454
360	7/2/02	EPA Special	Batch#7 Sample#3 21D	30.9	-3.91	2.49	3.82	0.75	3.33	0.99	7.15	1.242014493	13.29	8.86	1.310343	3.10992	5.7288
361	7/2/02	EPA Special	Batch#7 Sample#4 21D	29	1.52	2.8	5.52	0.81	3.34	1.03	8.86	1.310343466	10.94	6.19	0.970052	-1.59588	4.17384
362	7/2/02	EPA Special	Batch#7 Sample#5 21D	29.1	-0.78	2.04	3.52	0.59	2.67	0.77	6.19	0.970051545	18.16	33.99	2.049	-1.18668	9.14562
363	7/2/02	EPA Special	Batch#8 Sample#1 21D	30.7	-0.58	4.47	20.09	1.28	13.9	1.6	33.99	2.048999756	18.39	37.24	2.113031	0.98208	9.32976
364	7/2/02	EPA Special	Batch#8 Sample#2 21D	31.8	0.48	4.56	22.37	1.32	14.87	1.65	37.24	2.113030998	12.25	38.59	1.338432	-6.05616	5.91294
365	7/2/02	EPA Special	Batch#8 Sample#3 21D	32.5	-2.96	2.89	22.71	0.83	15.88	1.05	38.59	1.338431918	21.27	37.15	2.411327	-4.13292	10.68012
366	7/2/02	EPA Special	Batch#8 Sample#4 21D	32.1	-2.02	5.22	22.76	1.51	14.39	1.88	37.15	2.411327435	17.42	37.64	2.063056	11.68266	9.32976
367	7/2/02	EPA Special	Batch#8 Sample#5 21D	31.3	5.71	4.56	22.45	1.29	15.19	1.61	37.64	2.063055986	22.99	36.99	2.633724	8.32722	12.29646
368	7/2/02	exclusion zone	S1169 F-5.9	24.6	4.07	6.01	30.88	1.69	6.11	2.02	36.99	2.6337236	173.85	577.98	26.63101	-536.645	125.4607

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
369	7/2/02	exclusion zone	S1170 F.8-5.5	26	-262.29	61.32	507.12	17.47	70.86	20.1	577.98	26.63101387	27.64	55.68	3.553322	2.046	17.04318
370	7/2/02	exclusion zone	S1171 G-2.5	28.4	1	8.33	46.29	2.31	9.39	2.7	55.68	3.553322389	94.54	404.75	13.55673	-351.626	64 10118
371	7/2/02	exclusion zone	S1172 G-2	22.9	-171.86	31.33	365.21	8.93	39.54	10.2	404.75	13.55672896	15.43	0.66	1.284562	-3.069	4.95132
372	7/3/02	background	bkg070302	7.5	-1.5	2.42	-0.74	0.74	1.4	1.05	0.66	1.284562182	19.86	7.5	1.992787	6.58812	8.83872
373	7/3/02	soil standard	soilst070302	36.9	3.22	4.32	6.23	1.24	1.27	1.56	7.5	1.992786993	14.75	13.59	1.436802	11.70312	6.48582
374	7/3/02	EPA Special	Batch#9 Sample#1 21D	32.3	5.72	3.17	8.68	0.9	4.91	1.12	13.59	1.436802004	13.12	9.6	1.188486	0.77748	5.13546
375	7/3/02	EPA Special	Batch#9 Sample#2 21D	32.8	0.38	2.51	5.78	0.74	3.82	0.93	9.6	1.188486432	12.99	11.77	1.288449	5.97432	5.70834
376	7/3/02	EPA Special	Batch#9 Sample#3 21D	33.9	2.92	2.79	6.81	0.8	4.96	1.01	11.77	1.28844868	11.03	10.85	1.096358	-2.39382	4.74672
377	7/3/02	EPA Special	Batch#9 Sample#4 21D	32.1	-1.17	2.32	6.98	0.68	3.87	0.86	10.85	1.096357606	19.37	13.76	1.848053	3.76464	7.93848
378	7/3/02	EPA Special	Batch#9 Sample#5 21D	36.5	1.84	3.88	5.88	1.12	7.88	1.47	13.76	1.84805303	21.52	14.37	2.202294	0.1023	9.24792
379	7/3/02	overburden	S1173 G-11 OB#1	31.2	0.05	4.52	6.9	1.35	7.47	1.74	14.37	2.202294258	17.45	6.19	1.396173	12.11232	5.95386
380	7/3/02	overburden	S1174 G-11 OB#2	41.9	5.92	2.91	0.07	0.82	6.12	1.13	6.19	1.396173342	17.18	1.95	1.43405	5.38098	6.3426
381	7/3/02	overburden	S1175 G-11 OB#3	34.4	2.63	3.1	1.12	0.87	0.83	1.14	1.95	1.434050208	20.01	2.05	1.558012	8.75688	6.8541
382	7/3/02	overburden	S1176 G-11 OB QC	36.3	4.28	3.35	-0.04	0.93	2.09	1.25	2.05	1.558011553	18.79	5.96	1.45	-11.9282	6.05616
383	7/3/02	overburden	S1177 G-11 OB#1 (2)	48.3	-5.83	2.96	2.21	0.87	3.75	1.16	5.96	1.45	26.72	6.22	2.184033	-1.98462	9.1047
384	7/3/02	overburden	S1178 G-11 OB#4	47.1	-0.97	4.45	2.53	1.32	3.69	1.74	6.22	2.184032967	14.97	6.75	1.356024	-0.04092	5.74926
385	7/3/02	overburden	S1179 G-11 OB#5	46.7	-0.02	2.81	3.75	0.82	3	1.08	6.75	1.356023599	13.36	1.39	1.201041	-6.56766	4.3989
386	7/8/02	background	bkg070802	7.5	-3.21	2.15	0.14	0.68	1.25	0.99	1.39	1.201041215	14.23	7.57	1.276127	1.1253	5.3196
387	7/8/02	soil standard	soilst070802	36.9	0.55	2.6	3.18	0.78	4.39	1.01	7.57	1.276126953	73.09	252.01	9.714119	-50.2088	41.20644
388	7/8/02	exclusion zone	S1180 G-8 Batch#1	42.6	-24.54	20.14	96.32	5.79	155.69	7.8	252.01	9.714118591	39.8	165.4	5.039782	-21.6058	22.6083
389	7/8/02	EPA Special	Batch#1 Sample#1 32D	21.7	-10.56	11.05	95.67	3.13	69.73	3.95	165.4	5.039781741	32.26	146.83	4.358865	-54.1167	19.55976
390	7/8/02	EPA Special	Batch#1 Sample#2 32D	20.3	-26.45	9.56	92.25	2.74	54.58	3.39	146.83	4.358864531	33.65	177.37	4.468132	-54.8123	20.00988
391	7/8/02	EPA Special	Batch#1 Sample#3 32D	21.6	-26.79	9.78	108.55	2.79	68.82	3.49	177.37	4.468131601	26.84	104.95	3.463943	-27.1095	15.52914
392	7/8/02	EPA Special	Batch#1 Sample#4 32D	21.9	-13.25	7.59	64.35	2.17	40.6	2.7	104.95	3.46394284	56.76	225.84	7.47457	-68.2546	33.32934
393	7/8/02	EPA Special	Batch#1 Sample#5 32D	21.5	-33.36	16.29	131.83	4.64	94.01	5.86	225.84	7.474570222	14.71	3.99	1.316055	-0.36828	5.4219
394	7/8/02	EPA	A.5-D/15.5-17.5 EPA#1	26.5	-0.18	2.65	1.6	0.78	2.39	1.06	3.99	1.31605471	11.02	4.2	0.928009	1.8414	3.84648
395	7/8/02	EPA	A.5-D/15.5-17.5 EPA#2	27.9	0.9	1.88	1.86	0.56	2.34	0.74	4.2	0.928008621	13.1	4.77	1.142016	11.94864	5.09454
396	7/8/02	EPA	A.5-D/15.5-17.5 EPA#3	28.1	5.84	2.49	2.46	0.69	2.31	0.91	4.77	1.142015762	14.16	4	1.214002	9.5139	5.3196

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Complete File of Nutranl Samples

Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
397	7/8/02 EPA		A.5-D/15.5-17.5 EPA#4	26.5	4.65	2.6	1.51	0.73	2.49	0.97	4	1.214001647	9.06	4.99	0.814002	2.37336	3.39636
398	7/8/02 EPA		A.5-D/15.5-17.5 EPA#5	26.3	1.16	1.66	1.8	0.49	3.19	0.65	4.99	0.814002457	11.86	2.74	0.980051	-6.30168	3.84648
399	7/8/02 EPA		A.5-D.5/14-15.5 EPA#1	29.8	-3.08	1.88	0.92	0.58	1.82	0.79	2.74	0.980051019	10.92	2.41	1.014002	2.88486	4.25568
400	7/8/02 EPA		A.5-D.5/14-15.5 EPA#2	30.1	1.41	2.08	1.6	0.61	0.81	0.81	2.41	1.014001972	10.2	3.05	0.854459	2.98716	3.49866
401	7/8/02 EPA		A.5-D.5/14-15.5 EPA#3	30.5	1.46	1.71	-0.44	0.49	3.49	0.7	3.05	0.854458893	12.78	2.58	0.994032	-0.77748	4.15338
402	7/8/02 EPA		A.5-D.5/14-15.5 EPA#4	31	-0.38	2.03	0.34	0.59	2.24	0.8	2.58	0.994032193	9.06	2.74	0.75	-3.35544	3.02808
403	7/8/02 EPA		A.5-D.5/14-15.5 EPA#5	29.4	-1.64	1.48	1.34	0.45	1.4	0.6	2.74	0.75	15.72	3.4	1.280039	2.2506	5.38098
404	7/8/02 EPA		B-C/9-13 EPA#1	31.6	1.1	2.63	0.59	0.76	2.81	1.03	3.4	1.280039062	7.04	3.49	0.6	-4.25568	2.4552
405	7/8/02 EPA		B-C/9-13 EPA#2	31.5	-2.08	1.2	1.48	0.36	2.01	0.48	3.49	0.6	12.44	2.91	1.006032	0.9207	4.23522
406	7/8/02 EPA		B-C/9-13 EPA#3	31.7	0.45	2.07	1.24	0.61	1.67	0.8	2.91	1.006031809	11.39	2.42	0.934077	3.04854	4.07154
407	7/8/02 EPA		B-C/9-13 EPA#4	31.6	1.49	1.99	1.77	0.57	0.65	0.74	2.42	0.934077085	11.94	3.26	1.144028	-0.75702	4.62396
408	7/8/02 EPA		B-C/9-13 EPA#5	31.7	-0.37	2.26	1.38	0.68	1.88	0.92	3.26	1.144027972	10.34	1.42	0.858021	3.08946	3.64188
409	7/8/02 EPA		A.5-E/13-14 EPA#1	31.6	1.51	1.78	0.26	0.51	1.16	0.69	1.42	0.858020979	11.87	2.8	0.986002	2.29152	4.13292
410	7/8/02 EPA		A.5-E/13-14 EPA#2	32.2	1.12	2.02	0.65	0.59	2.15	0.79	2.8	0.986002028	10.61	2.12	0.864002	0.3069	3.60096
411	7/8/02 EPA		A.5-E/13-14 EPA#3	31.7	0.15	1.76	1.03	0.52	1.09	0.69	2.12	0.864002315	10.99	2.34	0.888144	4.03062	3.76464
412	7/8/02 EPA		A.5-E/13-14 EPA#4	30.7	1.97	1.84	0.29	0.52	2.05	0.72	2.34	0.888144132	11.82	1.54	0.962133	2.00508	4.13292
413	7/8/02 EPA		A.5-E/13-14 EPA#5	31.7	0.98	2.02	1.32	0.59	0.22	0.76	1.54	0.962133047	9.72	5.68	0.89202	8.7978	3.84648
414	7/8/02 EPA		C-E/9-11 EPA#1	30.8	4.3	1.88	2.25	0.54	3.43	0.71	5.68	0.892020179	13.21	5.76	1.202539	3.6828	5.23776
415	7/8/02 EPA		C-E/9-11 EPA#2	30.3	1.8	2.56	3.91	0.75	1.85	0.94	5.76	1.202538981	12.53	4.17	1.126144	-0.65472	4.74672
416	7/8/02 EPA		C-E/9-11 EPA#3	31.5	-0.32	2.32	3.11	0.69	1.06	0.89	4.17	1.126143863	12.17	4.44	1.048094	12.03048	4.58304
417	7/8/02 EPA		C-E/9-11 EPA#4	29.7	5.88	2.24	2.37	0.64	2.07	0.83	4.44	1.048093507	14.12	6.28	1.362094	-4.68534	5.64696
418	7/8/02 EPA		C-E/9-11 EPA#5	30.9	-2.29	2.76	3.88	0.83	2.4	1.08	6.28	1.362093976	11.78	4.79	0.978008	4.84902	4.25568
419	7/8/02 EPA		C-E/11-13 EPA#1	33.3	2.37	2.08	1.72	0.59	3.07	0.78	4.79	0.97800818	10.03	4.26	0.85276	1.8414	3.84648
420	7/8/02 EPA		C-E/11-13 EPA#2	32.5	0.9	1.88	4.38	0.54	-0.12	0.66	4.26	0.852760224	14.05	5.92	1.246315	-6.138	5.17638
421	7/8/02 EPA		C-E/11-13 EPA#3	33	-3	2.53	3.46	0.77	2.46	0.98	5.92	1.246314567	12.22	3.9	0.990202	-1.78002	4.25568
422	7/8/02 EPA		C-E/11-13 EPA#4	32.8	-0.87	2.08	2.56	0.61	1.34	0.78	3.9	0.990202	10.79	5.24	0.962133	0.38874	4.1943

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
423	7/8/02	EPA	C-E/11-13 EPA#5	32.1	0.19	2.05	3.42	0.59	1.82	0.76	5.24	0.962133047	13.16	0.74	1.074151	0.36828	4.3989
424	7/9/02	background	bkg070902	7.5	0.18	2.15	-0.18	0.63	0.92	0.87	0.74	1.074150827	14.74	7.59	1.318218	4.8081	5.74926
425	7/9/02	soil standard	soilstd070902 Batch#2	36.9	2.35	2.81	4.41	0.81	3.18	1.04	7.59	1.318218495	12.16	6.58	1.168247	-6.4449	4.93086
426	7/9/02	EPA Special	Sample#1 32D Batch#2	27.8	-3.15	2.41	4.43	0.72	2.15	0.92	6.58	1.168246549	12.56	8.27	1.326122	3.49866	5.6265
427	7/9/02	EPA Special	Sample#2 32D Batch#2	27.8	1.71	2.75	4.52	0.81	3.75	1.05	8.27	1.326122166	10.47	5.54	0.886002	0.5115	3.74418
428	7/9/02	EPA Special	Sample#3 32D Batch#2	27.2	0.25	1.83	2.15	0.53	3.39	0.71	5.54	0.886002257	14.44	6.41	1.222007	9.49344	5.19684
429	7/9/02	EPA Special	Sample#4 32D Batch#2	26.7	4.64	2.54	1.57	0.73	4.84	0.98	6.41	1.222006547	10.47	6.73	0.956033	-2.78256	3.9897
430	7/9/02	EPA Special	Sample#5 32D Batch#3	28.5	-1.36	1.95	3.64	0.58	3.09	0.76	6.73	0.956033472	10.08	3.12	0.858021	0.6138	3.62142
431	7/9/02	EPA Special	Sample#1 32D Batch#3	28.3	0.3	1.77	1.02	0.51	2.1	0.69	3.12	0.858020979	11.59	2.65	0.980051	7.28376	4.27614
432	7/9/02	EPA Special	Sample#2 32D Batch#3	28	3.56	2.09	1.18	0.58	1.47	0.79	2.65	0.980051019	9.14	3.89	0.814002	-3.96924	3.3759
433	7/9/02	EPA Special	Sample#3 32D Batch#3	27	-1.94	1.65	2.06	0.49	1.83	0.65	3.89	0.814002457	8.3	4.06	0.756042	-7.65204	3.10992
434	7/9/02	EPA Special	Sample#4 32D Batch#3	28.6	-3.74	1.52	2.69	0.46	1.37	0.6	4.06	0.756042327	12.42	3.12	1.084066	0.77748	4.58304
435	7/9/02	EPA Special	Sample#5 32D	28.9	0.38	2.24	2.4	0.66	0.72	0.86	3.12	1.084066419	11.77	4.88	1.06827	-4.9104	4.58304
436	7/9/02	exclusion zone	S1211 F.5-9	22.5	-2.4	2.24	4.45	0.66	0.43	0.84	4.88	1.068269629	13.48	3.86	1.092016	-0.22506	4.72626
437	7/9/02	exclusion zone	S1212 F.5-9.5	23.3	-0.11	2.31	2.21	0.66	1.65	0.87	3.86	1.092016483	22.5	24.08	2.312055	-7.5702	9.73896
438	7/9/02	exclusion zone	S1213 G.5-2	21	-3.7	4.76	11.89	1.4	12.19	1.84	24.08	2.312055363	753.29	1398.29	115.9674	-2510.18	525.4333
439	7/9/02	exclusion zone	S1214 G.3-3	27.4	-1226.87	256.81	1264.85	76.37	133.44	87.27	1398.29	115.9673652	21.89	23.85	2.644126	-1.41174	11.84634
440	7/9/02	exclusion zone	S1215G.5-3	19.5	-0.69	5.79	17.01	1.67	6.84	2.05	23.85	2.644125564	11.11	-0.26	0.870057	-0.53196	3.64188
441	7/10/02	background	bkg071002	7.5	-0.26	1.78	0.28	0.53	-0.54	0.69	-0.26	0.870057469	14.75	7.96	1.348073	-4.07154	5.70834
442	7/10/02	soil standard	soilstd071002	36.9	-1.99	2.79	4.3	0.82	3.66	1.07	7.96	1.348072698	21.18	15.74	2.164625	-15.2222	9.1047
443	7/10/02	exclusion zone	S1216 H.5 Batch#4	34.8	-7.44	4.45	10.52	1.34	5.22	1.7	15.74	2.164624679	13.67	3.87	1.228007	0.77748	5.115
444	7/10/02	EPA Special	Sample#1 30D Batch#4	27	0.38	2.5	2.11	0.74	1.76	0.98	3.87	1.228006515	10.93	3.72	0.948103	-2.39382	3.9897
445	7/10/02	EPA Special	Sample#2 30D Batch#4	28.9	-1.17	1.95	2.11	0.58	1.61	0.75	3.72	0.94810337	12.85	3.41	1.020049	0.45012	4.31706
446	7/10/02	EPA Special	Sample#3 30D Batch#4	29.2	0.22	2.11	1.39	0.62	2.02	0.81	3.41	1.020049018	11.68	3.32	0.960208	0.98208	4.07154
447	7/10/02	EPA Special	Sample#4 30D Batch#4	27.7	0.48	1.99	1.14	0.56	2.18	0.78	3.32	0.960208311	15	3.66	1.340149	3.15084	5.76972
448	7/10/02	EPA Special	Sample#5 30D Batch#5	29.6	1.54	2.82	1.86	0.82	1.8	1.06	3.66	1.340149245	11.19	5.58	1.022008	1.24806	4.35798
449	7/10/02	EPA Special	Sample#1 30D Batch#5	23.5	0.61	2.13	2.33	0.61	3.25	0.82	5.58	1.022007828	14.61	6.79	1.356024	-2.53704	5.58558
450	7/10/02	EPA Special	Sample#2 30D	22.9	-1.24	2.73	2.66	0.82	4.13	1.08	6.79	1.356023599	10.68	4.84	0.910494	-8.2863	3.82602

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
451	7/10/02	EPA Special	Batch#5 Sample#3 30D	21.2	-4.05	1.87	4.13	0.57	0.71	0.71	4.84	0.910494371	13.16	4.32	1.136002	-8.53182	4.56258
452	7/10/02	EPA Special	Batch#5 Sample#4 30D	21.1	-4.17	2.23	2.09	0.68	2.23	0.91	4.32	1.136001761	12.74	4.11	1.118258	6.62904	4.9104
453	7/10/02	EPA Special	Batch#5 Sample#5 30D	21.8	3.24	2.4	2.82	0.69	1.29	0.88	4.11	1.118257573	37.09	199.43	5.299528	-53.4006	24.30648
454	7/10/02	EPA Special	Batch#6 Sample#1 30D	24.5	-26.1	11.88	138.19	3.37	61.24	4.09	199.43	5.299528281	31.35	159.29	4.195772	-55.8763	19.39608
455	7/10/02	EPA Special	Batch#6 Sample#2 30D	24.4	-27.31	9.48	117.83	2.69	41.46	3.22	159.29	4.195771681	38	176.79	5.113824	-35.4981	23.69268
456	7/10/02	EPA Special	Batch#6 Sample#3 30D	25.2	-17.35	11.58	124.61	3.26	52.18	3.94	176.79	5.113824401	29.48	180.39	4.19068	-68.6638	19.2324
457	7/10/02	EPA Special	Batch#6 Sample#4 30D	24.9	-33.56	9.4	128.29	2.67	52.1	3.23	180.39	4.190680136	42.87	184.96	6.072133	-76.8068	27.25272
458	7/10/02	EPA Special	Batch#6 Sample#5 30D	23.6	-37.54	13.32	119.27	3.82	65.69	4.72	184.96	6.072133068	9.58	10.1	0.990202	-7.5702	4.1943
459	7/10/02	exclusion zone	S1217 G-7	29	-3.7	2.05	7.07	0.61	3.03	0.78	10.1	0.990202	20.01	7	1.968146	-0.85932	8.34768
460	7/10/02	exclusion zone	S1218 G.5-5.5	30.9	-0.42	4.08	4.12	1.2	2.88	1.56	7	1.968146336	15.4	23.56	1.666433	6.83364	7.34514
461	7/10/02	exclusion zone	S1219 G.8-5.5	31.2	3.34	3.59	13.01	1.03	10.55	1.31	23.56	1.666433317	13.04	-0.85	1.086002	6.19938	4.7058
462	7/11/02	background	bkg071102	7.5	3.03	2.3	0.52	0.65	-1.37	0.87	-0.85	1.086001842	20.37	8.8	1.768163	-7.71342	7.3656
463	7/11/02	soil standard	soilstd071102	36.9	-3.77	3.6	4.64	1.08	4.16	1.4	8.8	1.768162888	12.08	6.78	1.082312	2.84394	4.78764
464	7/11/02	EPA Special	Batch#7 Sample#1 30D	29.8	1.39	2.34	4.28	0.67	2.5	0.85	6.78	1.082312339	13.63	6.35	1.188108	-1.98462	4.86948
465	7/11/02	EPA Special	Batch#7 Sample#2 30D	28.6	-0.97	2.38	1.58	0.7	4.77	0.96	6.35	1.188107739	11.39	6.23	0.990202	-3.92832	4.13292
466	7/11/02	EPA Special	Batch#7 Sample#3 30D	30.9	-1.92	2.02	3.52	0.61	2.71	0.78	6.23	0.990202	11.31	7.45	1.01671	2.72118	4.5012
467	7/11/02	EPA Special	Batch#7 Sample#4 30D	29	1.33	2.2	5.43	0.64	2.02	0.79	7.45	1.016710382	14.11	4.33	1.130708	0.98208	4.93086
468	7/11/02	EPA Special	Batch#7 Sample#5 30D	29.1	0.48	2.41	3.02	0.71	1.31	0.88	4.33	1.130707743	13.05	38.25	1.466492	-0.98208	6.48582
469	7/11/02	EPA Special	Batch#8 Sample#1 30D	30.7	-0.48	3.17	21.96	0.91	16.29	1.15	38.25	1.466492414	16.87	37.64	1.980404	19.92804	8.9001
470	7/11/02	EPA Special	Batch#8 Sample#2 30D	31.8	9.74	4.35	20.44	1.22	17.2	1.56	37.64	1.980403999	11.94	38.84	1.388416	-1.5345	6.09708
471	7/11/02	EPA Special	Batch#8 Sample#3 30D	32.5	-0.75	2.98	22.29	0.86	16.55	1.09	38.84	1.388416364	16.45	34.7	1.878776	-0.9207	8.34768
472	7/11/02	EPA Special	Batch#8 Sample#4 30D	32.1	-0.45	4.08	20.67	1.17	14.03	1.47	34.7	1.878776197	15.35	36.79	1.808535	-4.95132	7.89756
473	7/11/02	EPA Special	Batch#8 Sample#5 30D	31.3	-2.42	3.86	21.4	1.12	15.39	1.42	36.79	1.808535319	15.73	9.41	1.662077	10.06632	7.3656
474	7/11/02	exclusion zone	S1220 H-8 S1221 E-19	35.8	4.92	3.6	5.49	1.01	3.92	1.32	9.41	1.662077014	15.23	3.46	1.256025	-0.7161	5.27868
475	7/11/02	overburden	OB#1 S1222 E-19	34.5	-0.35	2.58	2.65	0.76	0.81	1	3.46	1.256025477	15.3	3.96	1.396281	-6.8541	5.8311
476	7/11/02	overburden	OB#2 S1223 E-19	35.6	-3.35	2.85	4.21	0.86	-0.25	1.1	3.96	1.396280774	13	4.75	1.142016	-9.84126	4.66488
477	7/11/02	overburden	OB#3	36.6	-4.81	2.28	3.15	0.69	1.6	0.91	4.75	1.142015762	16.91	3.59	1.428006	8.34768	6.26076

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
478	7/11/02	overburden	S1224 E-19 OB#4	36.3	4.08	3.06	1.2	0.86	2.39	1.14	3.59	1.428005602	14.37	3.82	1.226132	-6.09708	5.17638
479	7/11/02	overburden	S1225 E-19 OB QC	35.4	-2.98	2.53	2.94	0.75	0.88	0.97	3.82	1.22613213	14.81	5.42	1.330038	-0.47058	5.4219
480	7/11/02	Pre EPA	S1226 E-G/2-4 Pre EPA	27.2	-0.23	2.65	2.02	0.79	3.4	1.07	5.42	1.330037593	12.65	4.08	1.052093	-8.02032	4.23522
481	7/11/02	Pre EPA	S1227 E-G/4-6 Pre EPA	25.6	-3.92	2.07	1.03	0.62	3.05	0.85	4.08	1.052093152	16.38	2.11	1.370036	2.72118	5.85156
482	7/11/02	Pre EPA	S1228 E-G/6-8 Pre EPA	27.4	1.33	2.86	2.1	0.83	0.01	1.09	2.11	1.370036496	13.69	2.81	1.164002	-1.1253	4.8081
483	7/11/02	Pre EPA	S1229 E-G/8-10 Pre EPA	28.9	-0.55	2.35	1.02	0.7	1.79	0.93	2.81	1.164001718	15.35	4.28	1.620494	3.02808	6.5472
484	7/11/02	Pre EPA	S1230 E-F/10-11 Pre EPA	28.7	1.48	3.2	1.07	0.94	3.21	1.32	4.28	1.620493752	14.4	0.31	1.131592	7.161	4.62396
485	7/12/02	background	bkg071202	7.5	3.5	2.26	-1.24	0.63	1.55	0.94	0.31	1.131591799	15.64	7.24	1.502431	-1.3299	6.5472
486	7/12/02	soil standard	soilstd071202 Batch#9	36.9	-0.65	3.2	4.69	0.93	2.55	1.18	7.24	1.502431363	14.81	13.26	1.393126	-4.74672	6.17892
487	7/12/02	EPA Special	Sample#1 30D Batch#9	32.2	-2.32	3.02	10	0.88	3.26	1.08	13.26	1.393125981	12.83	9.3	1.280625	8.26584	5.79018
488	7/12/02	EPA Special	Sample#2 30D Batch#9	32.8	4.04	2.83	6.72	0.8	2.58	1	9.3	1.280624847	7.67	12.62	0.804301	0.45012	3.53958
489	7/12/02	EPA Special	Sample#3 30D Batch#9	33.9	0.22	1.73	8.8	0.5	3.82	0.63	12.62	0.804300939	13.87	9.38	1.224418	9.96402	5.40144
490	7/12/02	EPA Special	Sample#4 30D Batch#9	32.1	4.87	2.64	4.69	0.76	4.69	0.96	9.38	1.224418229	12.67	13.94	1.332254	1.75956	5.76972
491	7/12/02	EPA Special	Sample#5 30D S1231 E-G/4-6	36.5	0.86	2.82	7.1	0.82	6.84	1.05	13.94	1.33225373	14.22	4.36	1.180042	6.21984	5.05362
492	7/12/02	EPA	EPA #1 S1232 E-G/4-6	32	3.04	2.47	1.83	0.7	2.53	0.95	4.36	1.180042372	10.17	5.54	0.890225	0.7161	3.84648
493	7/12/02	EPA	EPA #2 S1233 E-G/4-6	32.1	0.35	1.88	3.16	0.55	2.38	0.7	5.54	0.890224691	9.15	4.26	0.826196	4.97178	3.64188
494	7/12/02	EPA	EPA #3 S1234 E-G/4-6	31.3	2.43	1.78	3.38	0.51	0.88	0.65	4.26	0.826196103	12.41	6.9	1.212106	11.90772	5.36052
495	7/12/02	EPA	EPA #4 S1235 E-G/4-6	29.1	5.82	2.62	4.31	0.74	2.59	0.96	6.9	1.212105606	10.95	3.42	0.894036	-4.76718	3.60096
496	7/12/02	EPA	EPA #5 S1236 E-G/2-4	29.5	-2.33	1.76	0.75	0.53	2.67	0.72	3.42	0.894035793	10.93	3.18	0.978008	2.37336	4.13292
497	7/12/02	EPA	EPA #1 S1237 E-G/2-4	28.5	1.16	2.02	1.94	0.59	1.24	0.78	3.18	0.97800818	12.27	3.88	1.058017	11.37576	4.68534
498	7/12/02	EPA	EPA #2 S1238 E-G/2-4	23.8	5.56	2.29	1.53	0.63	2.35	0.85	3.88	1.058017013	13.63	3.23	1.198541	4.48074	4.95132
499	7/12/02	EPA	EPA #3 S1239 E-G/2-4	30.1	2.19	2.42	0.01	0.69	3.22	0.98	3.23	1.198540779	14.14	2.74	1.220041	11.60082	5.40144
500	7/12/02	EPA	EPA #4 S1240 E-G/2-4	28.3	5.67	2.64	1.39	0.74	1.35	0.97	2.74	1.220040983	10.2	2.81	0.846286	6.01524	3.53958
501	7/12/02	EPA	EPA #5 S1241 E-G/6-8	28.6	2.94	1.73	-0.25	0.49	3.06	0.69	2.81	0.846286004	11.05	1.38	0.884081	0.26598	3.6828
502	7/12/02	EPA	EPA #1 S1242 E-G/6-8	32.8	0.13	1.8	0.79	0.54	0.59	0.7	1.38	0.884081444	8.61	2.49	0.722011	8.184	3.04854
503	7/12/02	EPA	EPA #2 S1243 E-G/6-8	32.9	4	1.49	0.2	0.43	2.29	0.58	2.49	0.72201108	11.22	2.9	0.966075	-0.75702	3.9897
504	7/12/02	EPA	EPA #3	30.4	-0.37	1.95	1.1	0.57	1.8	0.78	2.9	0.966074531	14.3	2.32	1.216059	-1.37082	5.03316

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
505	7/12/02	EPA	S1244 E-G/6-8 EPA #4	28.4	-0.67	2.46	0.56	0.72	1.76	0.98	2.32	1.216059209	11.11	1.79	0.916079	4.99224	3.8874
506	7/12/02	EPA	S1245 E-G/6-8 EPA #5	30.3	2.44	1.9	0.62	0.54	1.17	0.74	1.79	0.916078599	11.68	3.9	1.008018	4.84902	4.21476
507	7/12/02	EPA	S1246 E-G/8-10 EPA #1	30.2	2.37	2.06	0.99	0.6	2.91	0.81	3.9	1.008017857	13.32	1.32	1.086002	6.87456	4.8081
508	7/12/02	EPA	S1247 E-G/8-10 EPA #2	27.5	3.36	2.35	1	0.65	0.32	0.87	1.32	1.086001842	11.23	3.18	1.032279	-0.24552	4.092
509	7/12/02	EPA	S1248 E-G/8-10 EPA #3	29.6	-0.12	2	0.49	0.6	2.69	0.84	3.18	1.032279032	10.82	2.63	0.958019	-1.88232	3.84648
510	7/12/02	EPA	S1249 E-G/8-10 EPA #4	26.7	-0.92	1.88	0.86	0.57	1.77	0.77	2.63	0.958018789	11.32	2.08	0.90802	1.28898	3.84648
511	7/12/02	EPA	S1250 E-G/8-10 EPA #5	27	0.63	1.88	0.88	0.54	1.2	0.73	2.08	0.908019824	37.67	185.63	5.028807	-36.6029	22.83336
512	7/12/02	exclusion zone	S1251 H-3	20.7	-17.89	11.16	115.42	3.15	70.21	3.92	185.63	5.028807016	63.37	205.38	9.339486	-192.283	43.92762
513	7/12/02	exclusion zone	S1252 H-4	23.6	-93.98	21.47	187.35	6.16	18.03	7.02	205.38	9.339486067	43.87	137.44	6.241739	-91.7017	29.83068
514	7/12/02	exclusion zone	S1253 H-3.5	21.2	-44.82	14.58	128.81	4.13	8.63	4.68	137.44	6.24173854	27.04	33.78	3.379601	-9.53436	14.69028
515	7/12/02	exclusion zone	S1254 H.5-4	27.1	-4.66	7.18	20.55	2.11	13.23	2.64	33.78	3.379600568	111.6	456.99	16.58303	-367.973	78.73008
516	7/12/02	exclusion zone	S1255 H.5-3	24.8	-179.85	38.48	406.97	10.92	50.02	12.48	456.99	16.58302747	16.54	1.26	1.398463	-6.15846	5.23776
517	7/15/02	background	bkg071502	7.5	-3.01	2.56	-0.75	0.81	2.01	1.14	1.26	1.398463442	19.64	6.79	1.721046	0.85932	7.71342
518	7/15/02	soil standard	soilstd071502	36.9	0.42	3.77	5.39	1.08	1.4	1.34	6.79	1.721046193	11.43	0.05	0.974166	-0.73656	3.90786
519	7/15/02	background	bkg(2)71502	7.5	-0.36	1.91	-0.17	0.57	0.22	0.79	0.05	0.97416631	16.64	9.04	1.730462	9.1047	7.73388
520	7/15/02	soil standard	soilstd(2)71502	36.9	4.45	3.78	5.98	1.07	3.06	1.36	9.04	1.730462366	18.08	15.56	1.727339	8.9001	7.85664
521	7/15/02	exclusion zone	S1256 H.8-3	30.7	4.35	3.84	11.85	1.09	3.71	1.34	15.56	1.727338994	23.91	12.85	2.416154	11.80542	11.1507
522	7/15/02	exclusion zone	S1257 H.8-4	33.7	5.77	5.45	9.94	1.53	2.91	1.87	12.85	2.416153969	13.39	-0.04	1.060189	3.76464	4.48074
523	7/16/02	background	bkg071602	7.5	1.84	2.19	-0.13	0.62	0.09	0.86	-0.04	1.060188662	15.91	6.43	1.366528	13.03302	6.19938
524	7/16/02	soil standard	soilstd071602	36.9	6.37	3.03	4.45	0.85	1.98	1.07	6.43	1.366528448	22.71	7.1	2.084035	-6.93594	8.55228
525	7/16/02	exclusion zone	S1258 H.5-8.5	21	-3.39	4.18	3.55	1.26	3.55	1.66	7.1	2.084034549	15.27	4.98	1.342013	-5.07408	5.44236
526	7/16/02	exclusion zone	S1259 I-7.5	22.5	-2.48	2.66	1.7	0.81	3.28	1.07	4.98	1.342013413	8.8	6.21	0.784092	0.85932	3.3759
527	7/16/02	exclusion zone	S1260 I-9	18.5	0.42	1.65	3.17	0.48	3.04	0.62	6.21	0.784091831	20.21	6.83	1.804134	7.83618	7.9794
528	7/16/02	exclusion zone	S1261 I-9.5	30	3.83	3.9	4.25	1.1	2.58	1.43	6.83	1.804134141	17.87	8.26	1.824281	6.15846	7.81572
529	7/16/02	soil standard	soilstd(2)071602	36.9	3.01	3.82	4.43	1.12	3.83	1.44	8.26	1.82428068	16.79	7.25	1.466492	-4.092	6.4449
530	7/16/02	exclusion zone	S1262 I.5-9.5	34.5	-2	3.15	6.01	0.91	1.24	1.15	7.25	1.466492414	4863.07	4598.69	745.977	-12147	3155.014
531	7/16/02	exclusion zone	S1263	48.8	-5936.95	1542.04	3809.19	482.01	789.5	569.34	4598.69	745.9769941	17.49	10.46	1.622899	-6.4449	6.46536
532	7/16/02	exclusion zone	S1264	29.3	-3.15	3.16	1.54	0.93	8.92	1.33	10.46	1.622898641	12.29	-0.26	0.974166	4.56258	4.1943
533	7/17/02	background	bkg071702	7.5	2.23	2.05	0.34	0.57	-0.6	0.79	-0.26	0.97416631	15.3	8.56	1.366528	1.86186	6.11754
534	7/17/02	soil standard	soilstd071702	36.9	0.91	2.99	5.65	0.85	2.91	1.07	8.56	1.366528448	21.78	8.89	2.002324	14.54706	9.04332
535	7/17/02	exclusion zone	S1265 I-10.5	32.2	7.11	4.42	5.64	1.23	3.25	1.58	8.89	2.00232365	15.6	23.51	2.067873	-4.41936	9.39114

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Complete File of Nutranl Samples

Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
536	7/17/02	exclusion zone	S1266 G.5-11	33.9	-2.16	4.59	20.59	1.31	2.92	1.6	23.51	2.067873304	24.86	21.45	2.491606	-4.17384	11.37576
537	7/17/02	exclusion zone	S1267 G-11	34	-2.04	5.56	18.16	1.6	3.29	1.91	21.45	2.491605908	772.29	1435.89	116.926	-2341.38	535.3564
538	7/17/02	exclusion zone	S1268 I-11	34.7	-1144.37	261.66	1304.63	77.06	131.26	87.94	1435.89	116.9259903	13.89	4.25	1.156028	-2.16876	4.86948
539	7/17/02	Pre-EPA	S1269 G-I.5/2-4	31.2	-1.06	2.38	1.77	0.7	2.48	0.92	4.25	1.156027681	14.71	5.68	1.298075	1.3299	5.54466
540	7/17/02	Pre-EPA	S1270 G-I.5/4-6	31.2	0.65	2.71	3.62	0.79	2.06	1.03	5.68	1.298075499	14.61	3.68	1.138112	-1.26852	4.64442
541	7/17/02	Pre-EPA	S1271 G-I.5/6-8	35.5	-0.62	2.27	0.29	0.67	3.39	0.92	3.68	1.138112472	16.76	3.03	1.338096	-6.91548	5.46282
542	7/17/02	Pre-EPA	S1272 G-I.5/8-9	35.2	-3.38	2.67	1.35	0.79	1.68	1.08	3.03	1.338095662	15.44	0.64	1.218277	-2.6598	4.82856
543	7/18/02	background	bkg071802	7.5	-1.3	2.36	-0.3	0.71	0.94	0.99	0.64	1.218277472	17.7	8.96	1.754138	8.47044	7.73388
544	7/18/02	soil standard	soilstd071802	36.9	4.14	3.78	4.95	1.07	4.01	1.39	8.96	1.754137965	10.62	11.41	1.102588	-1.39128	4.86948
545	7/18/02	exclusion zone	S1273 H-11	30.1	-0.68	2.38	9.1	0.69	2.31	0.86	11.41	1.102587865	21.76	4.32	1.862069	-1.37082	7.95894
546	7/18/02	overburden	S1274 D-19 OB#1	29.6	-0.67	3.89	3.62	1.13	0.7	1.48	4.32	1.862068742	20.74	3.62	1.594553	2.92578	7.0587
547	7/18/02	overburden	S1275 D-19 OB#2	30.2	1.43	3.45	2.74	0.99	0.88	1.25	3.62	1.594553229	18.85	2.96	1.572005	-10.6392	6.2403
548	7/18/02	overburden	S1276 D-19 OB#3	30.2	-5.2	3.05	2.07	0.94	0.89	1.26	2.96	1.572005089	15.71	2.34	1.214002	-3.8874	5.07408
549	7/18/02	overburden	S1277 D-19 OB QC	30.3	-1.9	2.48	1.24	0.73	1.1	0.97	2.34	1.214001647	16.29	6.2	1.504161	9.86172	6.83364
550	7/18/02	exclusion zone	S1278 H.5-11	33	4.82	3.34	4.84	0.92	1.36	1.19	6.2	1.504160896	17.83	4.9	1.493051	-4.1943	6.50628
551	7/18/02	exclusion zone	S1279 G.5-12	31.5	-2.05	3.18	4.44	0.94	0.46	1.16	4.9	1.493050568	24.82	45.13	3.23444	8.22492	15.40638
552	7/18/02	exclusion zone	S1280 I-10.5	30	4.02	7.53	39.72	2.1	5.41	2.46	45.13	3.234439673	13.6	-0.54	1.05603	-3.9897	4.3989
553	7/19/02	background	bkg071902	7.5	-1.95	2.15	0.56	0.64	-1.1	0.84	-0.54	1.056030303	13.77	8.45	1.372771	-1.00254	6.0357
554	7/19/02	soil standard	soilstd071902	36.9	-0.49	2.95	6.68	0.86	1.77	1.07	8.45	1.37277092	29.46	117.64	3.890823	-61.5232	18.55722
555	7/19/02	exclusion zone	S1281 B.75-6.25	18.5	-30.07	9.07	105.67	2.56	11.97	2.93	117.64	3.890822535	18.67	20.29	1.97952	3.9897	9.207
556	7/19/02	exclusion zone	S1282 F-14	42.2	1.95	4.5	18.28	1.28	2.01	1.51	20.29	1.979520144	17.13	0.69	1.830027	-5.40144	7.161
557	7/22/02	background	bkg072202	7.5	-2.64	3.5	1.61	1.09	-0.92	1.47	0.69	1.830027322	9.93	7.95	0.904268	-1.51404	3.92832
558	7/22/02	soil standard	soilstd072202	36.9	-0.74	1.92	5.29	0.56	2.66	0.71	7.95	0.904267659	10.75	2.35	0.894036	3.15084	3.74418
559	7/22/02	Pre EPA	S1283 E-G/10-12	37.5	1.54	1.83	0.89	0.53	1.46	0.72	2.35	0.894035793	13.78	2.6	1.160172	-7.6725	4.46028
560	7/22/02	Pre EPA	S1284 G-I/9-11	27.1	-3.75	2.18	0.69	0.68	1.91	0.94	2.6	1.160172401	11.32	3.2	0.958019	4.01016	4.03062
561	7/22/02	Pre EPA	S1285 G-I/11-13	32.6	1.96	1.97	0.72	0.57	2.48	0.77	3.2	0.958018789	10.2	2.33	0.82201	-3.53958	3.33498
562	7/22/02	EPA	G-I.5/8-9 EPA#1	30.3	-1.73	1.63	0.86	0.49	1.47	0.66	2.33	0.822009732	11.3	2.55	0.964002	0.94116	4.11246
563	7/22/02	EPA	G-I.5/8-9 EPA#2	32	0.46	2.01	1.5	0.58	1.05	0.77	2.55	0.964002075	9.75	2.22	0.808022	-2.046	3.3759
564	7/22/02	EPA	G-I.5/8-9 EPA#3	31.1	-1	1.65	1.32	0.48	0.9	0.65	2.22	0.808022277	10.34	2.9	0.85	-2.82348	3.51912
565	7/22/02	EPA	G-I.5/8-9 EPA#4	31.3	-1.38	1.72	1.2	0.51	1.7	0.68	2.9	0.85	11.52	2.54	0.958019	-2.92578	4.03062
566	7/22/02	EPA	G-I.5/8-9 EPA#5	30.1	-1.43	1.97	1.53	0.57	1.01	0.77	2.54	0.958018789	10.94	3.7	0.954254	0.5115	4.13292
567	7/22/02	EPA	G-I/9-11 EPA#1	29.4	0.25	2.02	2.84	0.59	0.86	0.75	3.7	0.954253635	12.18	4.12	1.038123	0.02046	4.31706
568	7/22/02	EPA	G-I/9-11 EPA#2	29.6	0.01	2.11	1.72	0.61	2.4	0.84	4.12	1.038123307	10.88	3.59	1.042017	7.4679	4.5012
569	7/22/02	EPA	G-I/9-11 EPA#3	29.9	3.65	2.2	2.02	0.63	1.57	0.83	3.59	1.042017274	9.99	4.52	0.90802	2.80302	3.7851
570	7/22/02	EPA	G-I/9-11 EPA#4	31.5	1.37	1.85	1.52	0.54	3	0.73	4.52	0.908019824	10.41	3.76	0.834086	-3.7851	3.49866
571	7/22/02	EPA	G-I/9-11 EPA#5	30.3	-1.85	1.71	1.71	0.51	2.05	0.66	3.76	0.834086326	12.69	3.04	1.064002	-2.39382	4.37844
572	7/22/02	EPA	G-I/11-13 EPA#1	33	-1.17	2.14	0.87	0.64	2.17	0.85	3.04	1.06400188	13.98	2.24	1.092016	-0.83886	4.5012

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
573	7/22/02	EPA	G-I/11-13 EPA#2	33.6	-0.41	2.2	0.64	0.66	1.6	0.87	2.24	1.092016483	12.99	3	1.022008	-5.58558	4.13292
574	7/22/02	EPA	G-I/11-13 EPA#3	33.2	-2.73	2.02	0.33	0.61	2.67	0.82	3	1.022007828	10.13	3.19	0.820061	-12.0305	3.25314
575	7/22/02	EPA	G-I/11-13 EPA#4	34.9	-5.88	1.59	1.75	0.5	1.44	0.65	3.19	0.820060973	15.1	2.05	1.188108	9.35022	5.27868
576	7/22/02	EPA	G-I/11-13 EPA#5	32.8	4.57	2.58	0.85	0.7	1.2	0.96	2.05	1.188107739	13.05	3.09	1.188486	7.2633	5.38098
577	7/22/02	EPA	G-I.5/2-4 EPA#1	29.3	3.55	2.63	2.86	0.74	0.23	0.93	3.09	1.188486432	12.37	2.58	0.998098	7.01778	4.52166
578	7/22/02	EPA	G-I.5/2-4 EPA#2	30.4	3.43	2.21	2.01	0.61	0.57	0.79	2.58	0.998098192	11.93	3.05	1.058017	2.29152	4.46028
579	7/22/02	EPA	G-I.5/2-4 EPA#3	29.7	1.12	2.18	1.17	0.63	1.88	0.85	3.05	1.058017013	7.62	3.28	0.656049	1.98462	2.82348
580	7/22/02	EPA	G-I.5/2-4 EPA#4	31.2	0.97	1.38	2.4	0.4	0.88	0.52	3.28	0.656048779	13.94	3.96	1.220041	10.10724	5.38098
581	7/22/02	EPA	G-I.5/2-4 EPA#5	31.3	4.94	2.63	2.03	0.74	1.93	0.97	3.96	1.220040983	14.26	3.63	1.226132	4.78764	5.4219
582	7/22/02	EPA	E-G/10-12 EPA#1	34.3	2.34	2.65	2.27	0.75	1.36	0.97	3.63	1.22613213	11.04	4.67	0.970052	-4.41936	3.9897
583	7/22/02	EPA	E-G/10-12 EPA#2	34.4	-2.16	1.95	2.63	0.59	2.04	0.77	4.67	0.970051545	12.75	4.08	1.064002	-1.28898	4.5012
584	7/22/02	EPA	E-G/10-12 EPA#3	33.7	-0.63	2.2	1.96	0.64	2.12	0.85	4.08	1.06400188	13.26	4.28	1.130044	-1.023	4.68534
585	7/22/02	EPA	E-G/10-12 EPA#4	31.9	-0.5	2.29	1.59	0.67	2.69	0.91	4.28	1.130044247	12.79	4.52	1.078007	8.06124	4.62396
586	7/22/02	EPA	E-G/10-12 EPA#5	33.7	3.94	2.26	1.57	0.65	2.95	0.86	4.52	1.078007421	13.68	0.52	1.224132	-3.04854	4.78764
587	7/23/02	background	bkg072302	7.5	-1.49	2.34	0.16	0.72	0.36	0.99	0.52	1.224132346	14.02	7.36	1.210372	4.76718	5.36052
588	7/23/02	soil standard	soilstd072302	36.9	2.33	2.62	5.03	0.75	2.33	0.95	7.36	1.210371844	10.79	1.1	0.864002	-0.57288	3.66234
589	7/23/02	EPA Sand	S1311 C-E/ 1-10 A	33.8	-0.28	1.79	1	0.52	0.1	0.69	1.1	0.864002315	11.95	1.08	0.930054	2.046	3.90786
590	7/23/02	EPA Sand	S1311 C-E/ 1-10 B	32.9	1	1.91	0.1	0.55	0.98	0.75	1.08	0.930053762	13.09	4.36	1.186002	-0.59334	4.97178
591	7/23/02	EPA	G-I.5/4-6 EPA#1	33.2	-0.29	2.43	1.85	0.71	2.51	0.95	4.36	1.186001686	12.33	4.07	1.064002	5.54466	4.58304
592	7/23/02	EPA	G-I.5/4-6 EPA#2	32.7	2.71	2.24	2.25	0.64	1.82	0.85	4.07	1.06400188	14.03	5.71	1.322006	1.78002	5.6265
593	7/23/02	EPA	G-I.5/4-6 EPA#3	32.6	0.87	2.75	3.11	0.79	2.6	1.06	5.71	1.322006051	13.82	4.49	1.172007	5.0127	5.0127
594	7/23/02	EPA	G-I.5/4-6 EPA#4	31.9	2.45	2.45	1.84	0.7	2.65	0.94	4.49	1.172006826	11.38	4.51	1.014002	0.4092	4.33752
595	7/23/02	EPA	G-I.5/4-6 EPA#5	32.2	0.2	2.12	2.51	0.61	2	0.81	4.51	1.014001972	9.33	2.32	0.764003	-0.1023	3.25314
596	7/23/02	EPA	G-I.5/6-8 EPA#1	35.5	-0.05	1.59	1.69	0.46	0.63	0.61	2.32	0.764002618	11.01	5.48	1.002098	1.2276	4.11246
597	7/23/02	EPA	G-I.5/6-8 EPA#2	35.6	0.6	2.01	1.57	0.59	3.91	0.81	5.48	1.0020978	10.3	3.11	0.9	1.14576	3.72372
598	7/23/02	EPA	G-I.5/6-8 EPA#3	35.7	0.56	1.82	1.7	0.54	1.41	0.72	3.11	0.9	13.91	1.47	1.078007	7.54974	4.78764
599	7/23/02	EPA	G-I.5/6-8 EPA#4	34.9	3.69	2.34	0.61	0.65	0.86	0.86	1.47	1.078007421	13.78	2.73	1.172007	0.45012	4.88994
600	7/23/02	EPA	G-I.5/6-8 EPA#5	37	0.22	2.39	1.05	0.7	1.68	0.94	2.73	1.172006826	16.14	3.39	1.636001	2.4552	6.81318
601	7/23/02	overburden	S1323 I-6 OB#1	33.4	1.2	3.33	1.85	0.98	1.54	1.31	3.39	1.636001222	22.36	2.44	1.78404	-4.43982	7.32468
602	7/23/02	overburden	S1324 I-6 OB#2	32.1	-2.17	3.58	1.15	1.08	1.29	1.42	2.44	1.784040358	17.23	2.52	1.416051	2.3529	5.85156
603	7/23/02	overburden	S1325 I-6 OB#3	29.6	1.15	2.86	0.62	0.84	1.9	1.14	2.52	1.416050847	14.2	3.92	1.220656	0.77748	4.95132
604	7/23/02	overburden	S1326 I-6 OB QC	34	0.38	2.42	-0.58	0.7	4.5	1	3.92	1.220655562	15.31	0.96	1.3	-2.27106	5.17638
605	7/24/02	background	bkg072402	7.5	-1.11	2.53	0.26	0.78	0.7	1.04	0.96	1.3	12.15	7.87	1.176138	7.54974	5.17638
606	7/24/02	soil standard	soilstd072402	36.9	3.69	2.53	4.45	0.72	3.42	0.93	7.87	1.176137747	26.55	15.13	2.772183	13.74912	12.84888
607	7/24/02	exclusion zone	S1327 B-2.25	23.6	6.72	6.28	12.32	1.75	2.81	2.15	15.13	2.772183255	14.31	0.43	1.210165	-12.1737	4.56258
608	7/25/02	background	bkg072502	7.5	-5.95	2.23	0.72	0.71	-0.29	0.98	0.43	1.210165278	14.19	8.66	1.338432	-0.4092	5.7288
609	7/25/02	soil standard	soilstd072502	36.9	-0.2	2.8	5.21	0.83	3.45	1.05	8.66	1.338431918	16.67	1.05	1.298499	-9.53436	4.76718
610	7/26/02	background	bkg072602	7.5	-4.66	2.33	-0.51	0.75	1.56	1.06	1.05	1.298499134	12.94	7.61	1.16211	12.60336	5.19684
611	7/26/02	soil standard	soilstd072602	36.9	6.16	2.54	3.87	0.71	3.74	0.92	7.61	1.16211015	11.52	1.65	0.922009	-8.75688	3.60096

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
612	7/26/02	EPA Sand	S1328 B-C/6-12 A	29.9	-4.28	1.76	0.8	0.55	0.85	0.74	1.65	0.922008677	12.24	1.25	0.972008	-2.23014	3.9897
613	7/26/02	EPA Sand	S1329 B-C/6-12 B	32.9	-1.09	1.95	0.94	0.58	0.31	0.78	1.25	0.97200823	12.72	1.32	1.042017	0.94116	4.1943
614	7/26/02	EPA Sand	S1330 B-C/1-6 C	27.8	0.46	2.05	0.65	0.63	0.67	0.83	1.32	1.042017274	14.59	-1.33	1.090413	2.94624	4.56258
615	7/29/02	background	bkg072902	7.5	1.44	2.23	-0.63	0.63	-0.7	0.89	-1.33	1.090412766	12.44	7.86	1.118258	10.27092	4.93086
616	7/29/02	soil standard	soilstd072902	36.9	5.02	2.41	4.08	0.69	3.78	0.88	7.86	1.118257573	10.1	2	0.82801	5.3196	3.62142
617	7/29/02	lift soil	S1331 B-C/1-10 #1	28.9	2.6	1.77	1.08	0.5	0.92	0.66	2	0.828009662	18.81	1.76	1.445164	2.98716	5.9334
618	7/29/02	lift soil	S1332 B-C/1-10 #2	28.6	1.46	2.9	-0.79	0.82	2.55	1.19	1.76	1.445164351	10.94	2.8	0.920054	-1.67772	3.90786
619	7/29/02	lift soil	S1333 B-C/1-10 #3	29.1	-0.82	1.91	1.73	0.56	1.07	0.73	2.8	0.920054346	17.53	3.29	1.469966	-5.03316	5.70834
620	7/29/02	lift soil	S1334 B-C/1-10 #4	28.9	-2.46	2.79	-0.81	0.82	4.1	1.22	3.29	1.469965986	14.91	1.69	1.284056	8.47044	5.68788
621	7/29/02	lift soil	S1335 B-C/1-10 #5	29.8	4.14	2.78	1.69	0.78	0	1.02	1.69	1.284056074	19.09	1.35	1.434503	18.90504	6.48582
622	7/29/02	lift soil	S1336 B-C/1-10 #6	27.8	9.24	3.17	-0.46	0.83	1.81	1.17	1.35	1.434503398	14.01	0.71	1.038123	-1.71864	4.37844
623	7/29/02	lift soil	S1337 B-C/10-16 #1	30.6	-0.84	2.14	0.26	0.61	0.45	0.84	0.71	1.038123307	14.37	2.79	1.222007	-5.6265	4.9104
624	7/29/02	lift soil	S1338 B-C/10-16 #2	29.8	-2.75	2.4	0.78	0.73	2.01	0.98	2.79	1.222006547	12.73	2.52	1.052093	6.4449	4.41936
625	7/29/02	lift soil	S1339 B-C/10-16 #3	33	3.15	2.16	0.52	0.62	2	0.85	2.52	1.052093152	15.43	2.6	1.278006	-9.04332	5.05362
626	7/29/02	lift soil	S1340 B-C/10-16 #4	31.8	-4.42	2.47	1.09	0.77	1.51	1.02	2.6	1.27800626	13.98	0.69	1.130044	-4.092	4.64442
627	7/29/02	lift soil	S1341 B-C/10-16 #5	32.9	-2	2.27	0.68	0.67	0.01	0.91	0.69	1.130044247	14.03	3.41	1.292749	5.6265	5.36052
628	7/29/02	lift soil	S1342 B-C/10-16 #6	30.5	2.75	2.62	0.23	0.74	3.18	1.06	3.41	1.292749009	18.46	-0.85	1.426359	8.85918	5.95386
629	7/30/02	background	bkg073002	7.5	4.33	2.91	-0.63	0.83	-0.22	1.16	-0.85	1.426359001	11.77	6.74	1.046375	3.74418	4.68534
630	7/30/02	soil standard	soilstd073002	36.9	1.83	2.29	5.26	0.65	1.48	0.82	6.74	1.046374694	16.97	7.4	1.572927	8.0817	6.40398
631	7/30/02	exclusion zone	S1343 E-5-2	20.8	3.95	3.13	0.1	0.9	7.3	1.29	7.4	1.572927207	13.94	0.46	1.298499	2.43474	5.17638
632	7/31/02	background	bkg073102	7.5	1.19	2.53	-0.25	0.75	0.71	1.06	0.46	1.298499134	11.46	8.39	1.038557	6.36306	4.68534
633	7/31/02	soil standard	soilstd073102	36.9	3.11	2.29	6.22	0.65	2.17	0.81	8.39	1.038556691	39.36	37.57	4.615886	22.97658	22.9152
634	7/31/02	exclusion zone	S1344 H-18.5	37.3	11.23	11.2	36.82	3.1	0.75	3.42	37.57	4.615885614	17.53	1.45	1.410142	-8.98194	5.64696
635	7/31/02	exclusion zone	S1345 H-9	38.5	-4.39	2.76	0.91	0.83	0.54	1.14	1.45	1.410141837	12.36	2.09	0.990202	8.20446	4.46028
636	7/31/02	Pre EPA	S1346 H-18.5 #1	30.8	4.01	2.18	1.96	0.61	0.13	0.78	2.09	0.990202	23.06	5.24	2.018167	6.30168	8.65458
637	7/31/02	Pre EPA	S1347 H-18.5 #2	31.8	3.08	4.23	1.9	1.19	3.34	1.63	5.24	2.018167486	13.73	-0.28	1.16211	-6.15846	4.6035
638	8/1/02	background	bkg080102	7.5	-3.01	2.25	0.82	0.71	-1.1	0.92	-0.28	1.16211015	13.5	7.85	1.260357	7.24284	5.56512
639	8/1/02	soil standard	soilstd080102	36.9	3.54	2.72	4.54	0.78	3.31	0.99	7.85	1.260357092	13.98	1.22	1.202082	8.47044	5.115
640	8/1/02	EPA Sand	S1348 B-C/12-16	30.2	4.14	2.5	-0.41	0.71	1.63	0.97	1.22	1.202081528	10.68	0.89	0.810247	1.6368	3.41682
641	8/1/02	EPA Sand	S1349 B-C/16-21	27.8	0.8	1.67	-0.21	0.47	1.1	0.66	0.89	0.810246876	10.04	1.62	0.788162	2.92578	3.31452
642	8/1/02	EPA Sand	S1350 E-G/3-7	30.6	1.43	1.62	-0.22	0.46	1.84	0.64	1.62	0.78816242	10.68	1.52	0.880057	1.49358	3.56004

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium						
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty						
643	8/1/02	EPA Sand	S1351 E-G/7-11	33.7	0.73	1.74	0.4	0.52	1.12	0.71	1.52	0.880056816	13.47	2.03	1.174138	7.44744	5.115	
644	8/1/02	EPA	S1352 H-19															
			EPA#1	24.5	3.64	2.5	0.83	0.69	1.2	0.95	2.03	1.174137982	10.52	3.17	0.934077	-1.06392	4.03062	
645	8/1/02	EPA	S1353 H-19															
			EPA#2	31.2	-0.52	1.97	2.45	0.57	0.72	0.74	3.17	0.934077085	11.3	3.74	1.010198	5.66742	4.23522	
646	8/1/02	EPA	S1354 H-19															
			EPA#3	30.6	2.77	2.07	0.98	0.59	2.76	0.82	3.74	1.010198	11.04	3.36	0.992018	-3.9897	3.9897	
647	8/1/02	EPA	S1355 H-19															
			EPA#4	33.3	-1.95	1.95	1.96	0.6	1.4	0.79	3.36	0.992018145	10.8	2.55	0.876185	-3.13038	3.70326	
648	8/1/02	EPA	S1356 H-19															
			EPA#5	31.7	-1.53	1.81	1.83	0.54	0.72	0.69	2.55	0.876184912	11.43	2.57	0.978008	8.53182	4.23522	
649	8/1/02	Pre EPA	S1357 H-I/8-9	37.7	4.17	2.07	1.14	0.59	1.43	0.78	2.57	0.97800818	9.52	1.78	0.77801	-0.85932	3.2736	
650	8/1/02	Pre EPA	S1358 H-I/9-10	35.5	-0.42	1.6	1.21	0.47	0.57	0.62	1.78	0.778010283	19.28	-0.68	1.448068	-1.04346	5.99478	
651	8/2/02	background	bkg080202	7.5	-0.51	2.93	0.63	0.88	-1.31	1.15	-0.68	1.448067678	15.05	7.55	1.382245	2.4552	6.0357	
652	8/2/02	soil standard	soilstd080202	36.9	1.2	2.95	4.47	0.85	3.08	1.09	7.55	1.382244551	11.72	4.41	1.066068	7.2633	4.54212	
653	8/2/02	Pre EPA	S1359 A.5/2.5	21.7	3.55	2.22	1.35	0.63	3.06	0.86	4.41	1.06606754	15.17	0.77	1.248519	12.05094	5.38098	
654	8/2/02	Pre EPA	S1360 E.5/2	36.3	5.89	2.63	-0.79	0.72	1.56	1.02	0.77	1.248519123	18.15	5.86	1.85235	-2.02554	8.02032	
655	8/2/02	exclusion zone	S1361 A/2.75-3.5															
			WALL	29.3	-0.99	3.92	4.58	1.14	1.28	1.46	5.86	1.852349859	11.19	0.87	0.932309	-0.42966	3.66234	
656	8/5/02	background	bkg080502	7.5	-0.21	1.79	-0.4	0.54	1.27	0.76	0.87	0.932308962	10.4	8.05	0.948103	6.0357	4.15338	
657	8/5/02	background	soilstd080502	36.9	2.95	2.03	4.64	0.58	3.41	0.75	8.05	0.94810337	13.74	4.85	1.156028	1.08438	4.82856	
658	8/5/02	Pre EPA	S1362 A/10.5	26	0.53	2.36	2.1	0.7	2.75	0.92	4.85	1.156027681	11.77	8.17	1.130708	-7.48836	4.8081	
659	8/5/02	Pre EPA	S1363 A/12.25	31.3	-3.66	2.35	6.07	0.71	2.1	0.88	8.17	1.130707743	15.65	0.31	1.398463	0.65472	5.7288	
660	8/6/02	background	bkg080602	7.5	0.32	2.8	-0.48	0.81	0.79	1.14	0.31	1.398463442	12.46	9.08	1.160388	3.35544	5.0127	
661	8/6/02	soil standard	soilstd080602	36.9	1.64	2.45	4.73	0.72	4.35	0.91	9.08	1.160387866	14.04	0.71	1.1	0.79794	4.74672	
662	8/6/02	Pre EPA	S1364 E-F/1-2.25	34.3	0.39	2.32	0.8	0.66	-0.09	0.88	0.71	1.1	17.43	7.07	1.564864	-3.51912	6.8541	
663	8/6/02	Pre EPA	S1365 A-12.25	34	-1.72	3.35	6.06	0.98	1.01	1.22	7.07	1.564864211	15.33	-0.19	1.146211	-7.91802	4.35798	
664	8/7/02	background	bkg080702	7.5	-3.87	2.13	-0.96	0.67	0.77	0.93	-0.19	1.14621115	9.24	7.1	0.796492	2.31198	3.51912	
665	8/7/02	soil standard	soilstd080702	36.9	1.13	1.72	4.86	0.5	2.24	0.62	7.1	0.79649231	10	2.61	0.85	-2.33244	3.53958	
666	8/7/02	EPA	A-A.5/2.5-3.5															
			EPA #1	27.2	-1.14	1.73	1.12	0.51	1.49	0.68	2.61	0.85	14.8	10.19	1.42436	0.08184	6.30168	
667	8/7/02	EPA	A-A.5/2.5-3.5															
			EPA #2	26.6	0.04	3.08	7.74	0.88	2.45	1.12	10.19	1.424359505	12.64	3.63	1.070047	4.37844	4.54212	
668	8/7/02	EPA	A-A.5/2.5-3.5															
			EPA #3	25.4	2.14	2.22	1.61	0.65	2.02	0.85	3.63	1.070046728	14.18	3.2	1.186002	-4.62396	4.86948	
669	8/7/02	EPA	A-A.5/2.5-3.5															
			EPA #4	25.8	-2.26	2.38	1.22	0.71	1.98	0.95	3.2	1.186001686	13.54	3.79	1.126144	-2.9667	4.72626	
670	8/7/02	EPA	A-A.5/2.5-3.5															
			EPA #5	25.4	-1.45	2.31	2.17	0.69	1.62	0.89	3.79	1.126143863	10.68	0.9	0.836002	-7.01778	3.31452	
671	8/7/02	EPA Sand	S1386 A-B/1-4	30.8	-3.43	1.62	0.25	0.5	0.65	0.67	0.9	0.836002392	11.79	0.96	0.916079	1.37082	3.8874	
672	8/7/02	EPA Sand	S1387 A-B/4-8	31.3	0.67	1.9	0.27	0.54	0.69	0.74	0.96	0.916078599	12.44	0.87	0.98813	5.50374	4.25568	
673	8/7/02	EPA Sand	S1388 A-B/8-12	36.1	2.69	2.08	0.23	0.58	0.64	0.8	0.87	0.988129546	14.18	1.57	1.152085	-1.00254	4.82856	
674	8/7/02	EPA Sand	S1389 A-B/12-15	38.5	-0.49	2.36	0.88	0.68	0.69	0.93	1.57	1.152085066	13.75	0.18	1.086002	0.6138	4.54212	
675	8/7/02	EPA	E-F/1-2.5 EPA #1	36	0.3	2.22	-0.04	0.65	0.22	0.87	0.18	1.086001842	18.14	1.38	1.406023	-5.25822	5.8311	
676	8/7/02	EPA	E-F/1-2.5 EPA #2	34.9	-2.57	2.85	0.93	0.85	0.45	1.12	1.38	1.406022759	8.48	1.22	0.70214	6.62904	2.9667	
677	8/7/02	EPA	E-F/1-2.5 EPA #3	34.2	3.24	1.45	-0.35	0.41	1.57	0.57	1.22	0.702139587	17.3	0.03	1.308014	7.38606	5.68788	
678	8/7/02	EPA	E-F/1-2.5 EPA #4	34.5	3.61	2.78	0.31	0.78	-0.28	1.05	0.03	1.308013761	12.52	2.25	1.240363	0.9207	4.8081	

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
679	8/7/02 EPA	E-F/1-2.5 EPA #5		34.7	0.45	2.35	0.18	0.72	2.07	1.01	2.25	1.24036285	15.05	0.33	1.15	-2.78256	4.9104
680	8/8/02 background	bkg080802		7.5	-1.36	2.4	0.93	0.69	-0.6	0.92	0.33	1.15	13.02	8.3	1.182286	0.47058	5.09454
681	8/8/02 soil standard	soilstd080802		36.9	0.23	2.49	5.05	0.73	3.25	0.93	8.3	1.182285921	9.15	2.99	0.758024	5.70834	3.25314
		E-F/13.5-15															
682	8/8/02 EPA	EPA#1		34.7	2.79	1.59	0.69	0.45	2.3	0.61	2.99	0.758023746	8.56	2.08	0.692026	-3.4782	2.92578
		E-F/13.5-15															
683	8/8/02 EPA	EPA#2		32.5	-1.7	1.43	1.51	0.42	0.57	0.55	2.08	0.692026011	10.23	2.42	0.872009	1.65726	3.70326
		E-F/13.5-15															
684	8/8/02 EPA	EPA#3		32.4	0.81	1.81	1.42	0.52	1	0.7	2.42	0.872009174	11.72	2.98	0.978008	0.73656	4.23522
		E-F/13.5-15															
685	8/8/02 EPA	EPA#4		33.2	0.36	2.07	1.77	0.59	1.21	0.78	2.98	0.97800818	11.92	3.36	1.052093	1.45266	4.41936
		E-F/13.5-15															
686	8/8/02 EPA	EPA#5		32.5	0.71	2.16	1.2	0.62	2.16	0.85	3.36	1.052093152	11.44	0.48	0.952103	9.39114	4.17384
687	8/8/02 EPA	H-I/8-10 EPA#1		34.6	4.59	2.04	0.07	0.56	0.41	0.77	0.48	0.952102936	11.69	0.67	0.930054	4.74672	3.90786
688	8/8/02 EPA	H-I/8-10 EPA#2		33.7	2.32	1.91	0.17	0.55	0.5	0.75	0.67	0.930053762	10.46	1.39	0.860233	5.66742	3.53958
689	8/8/02 EPA	H-I/8-10 EPA#3		34.2	2.77	1.73	-0.21	0.5	1.6	0.7	1.39	0.860232527	9.72	0.96	0.75	1.7391	3.1713
690	8/8/02 EPA	H-I/8-10 EPA#4		34.1	0.85	1.55	0.19	0.45	0.77	0.6	0.96	0.75	11.23	0.82	0.880057	0.69564	3.70326
691	8/8/02 EPA	H-I/8-10 EPA#5		32.1	0.34	1.81	0.03	0.52	0.79	0.71	0.82	0.880056816	15.53	1.29	1.238103	-1.90278	5.0127
692	8/8/02 EPA Sand	S1390 A-B/15-21		33.1	-0.93	2.45	-0.08	0.73	1.37	1	1.29	1.238103388	14.87	2.35	1.330038	3.3759	5.58558
693	8/8/02 EPA Sand	S1391 E-G/1-3		33.5	1.65	2.73	0.67	0.79	1.68	1.07	2.35	1.330037593	15.16	1.05	1.188108	1.57542	4.86948
694	8/8/02 EPA Sand	S1392 G-I/1-3		31.7	0.77	2.38	-0.48	0.7	1.53	0.96	1.05	1.188107739	15.12	1.17	1.180042	-3.15084	4.95132
695	8/8/02 EPA Sand	S1393 G-I/3-5		32.7	-1.54	2.42	0.47	0.7	0.7	0.95	1.17	1.180042372	15.19	1	1.201041	-0.94116	4.84902
696	8/8/02 EPA Sand	S1394 G-I/5-7		33.5	-0.46	2.37	-0.64	0.68	1.64	0.99	1	1.201041215	17.81	2.27	1.456022	-2.046	6.0357
697	8/8/02 EPA Sand	S1395 G-I/7-9		32.7	-1	2.95	1.55	0.88	0.72	1.16	2.27	1.456021978	17.35	1.14	1.394023	1.90278	6.0357
698	8/8/02 EPA Sand	S1396 G-I/9-11		33.9	0.93	2.95	1.55	0.83	-0.41	1.12	1.14	1.394022955	11.88	0.87	0.894036	-7.34514	3.53958
699	8/8/02 EPA Sand	S1397 G-I/11-13		34.4	-3.59	1.73	0.04	0.53	0.83	0.72	0.87	0.894035793	15.07	1.55	1.164002	-12.8489	4.64442
700	8/8/02 EPA Sand	S1398 G-I/13-15		35.1	-6.28	2.27	1.05	0.7	0.5	0.93	1.55	1.164001718	18.95	4.65	1.520033	14.56752	6.73134
701	8/8/02 EPA Sand	S1399 G-I/5 clay		39.7	7.12	3.29	1.19	0.92	3.46	1.21	4.65	1.520032894	16.31	0.75	1.464787	-4.8081	5.60604
702	8/9/02 background	bkg080902		7.5	-2.35	2.74	0.84	0.84	-0.09	1.2	0.75	1.464786674	14.27	8.72	1.294681	1.9437	5.60604
703	8/9/02 soil standard	soilstd080902		36.9	0.95	2.74	5.52	0.81	3.2	1.01	8.72	1.294681428	12.64	1.32	1.026499	-0.49104	4.07154
704	8/12/02 background	bkg081202		7.5	-0.24	1.99	-0.34	0.59	1.66	0.84	1.32	1.026498904	16.8	7.03	1.510298	2.39382	6.56766
705	8/12/02 soil standard	soilstd081202		36.9	1.17	3.21	4.51	0.93	2.52	1.19	7.03	1.510297984	8.29	-0.18	0.672012	1.67772	2.80302
706	8/13/02 background	bkg081302		7.5	0.82	1.37	0.27	0.4	-0.45	0.54	-0.18	0.672011905	12.15	8.68	1.182286	1.18668	5.0127
707	8/13/02 soil standard	soilstd081302		36.9	0.58	2.45	4.92	0.73	3.76	0.93	8.68	1.182285921	46.5	178.26	6.43199	-53.8507	30.30126
708	8/13/02 exclusion zone	S1400 H/20.25		29.4	-26.32	14.81	147.94	4.19	30.32	4.88	178.26	6.431990361	245.98	987.71	36.72661	-667.63	170.575
709	8/13/02 exclusion zone	S1401 G.5-20.5		28.9	-326.31	83.37	769.74	23.66	217.97	28.09	987.71	36.72660752	10.21	-0.02	0.810247	-0.85932	3.21222
710	8/14/02 background	bkg081402		7.5	-0.42	1.57	-0.59	0.47	0.57	0.66	-0.02	0.810246876	13.43	7.13	1.202539	1.39128	5.23776
711	8/14/02 soil standard	soilstd081402		36.9	0.68	2.56	4.89	0.75	2.24	0.94	7.13	1.202538981	8.6	0.39	0.64405	4.27614	2.7621
712	8/14/02 EPA Sand	G-I/ 15-17.5		35.2	2.09	1.35	-0.3	0.38	0.69	0.52	0.39	0.644049688	13.21	0.47	0.992018	-2.2506	4.25568
713	8/14/02 EPA Sand	G-I/ 17.5-20		34.7	-1.1	2.08	0.36	0.6	0.11	0.79	0.47	0.992018145	11.42	0.49	0.914002	-5.07408	3.62142
714	8/15/02 background	bkg081502		7.5	-2.48	1.77	0.55	0.55	-0.06	0.73	0.49	0.914002188	11.14	7.46	0.996393	3.10992	4.35798
715	8/15/02 soil standard	soilstd081502		36.9	1.52	2.13	5.39	0.62	2.07	0.78	7.46	0.996393497	17.25	3.26	1.382208	1.55496	5.6265
716	8/15/02 lift soil	S1404 F-14		35.7	0.76	2.75	-0.26	0.81	3.52	1.12	3.26	1.382208378	10.75	1.3	0.968349	-4.7058	3.7851
717	8/16/02 background	bkg081602		7.5	-2.3	1.85	0.36	0.56	0.94	0.79	1.3	0.968349111	13.12	8.25	1.224418	7.54974	5.46282
718	8/16/02 soil standard	soilstd081602		36.9	3.69	2.67	5.2	0.76	3.05	0.96	8.25	1.224418229	19.21	33.74	2.144621	-18.9869	9.59574
719	8/16/02 exclusion zone	S1405 J-9.5		24.1	-9.28	4.69	25.31	1.37	8.43	1.65	33.74	2.144621179	18.44	1.56	1.45	-9.37068	5.74926
720	8/16/02 overburden	S1406 J-7		35.7	-4.58	2.81	1.22	0.87	0.34	1.16	1.56	1.45	12.94	2.81	1.086002	-2.046	4.52166
721	8/16/02 overburden	S1407 I-2		34.8	-1	2.21	1.28	0.65	1.53	0.87	2.81	1.086001842	21.58	2.01	1.74201	-1.5345	7.161

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Complete File of Nutranl Samples																				
Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium								
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty								
722	8/16/02	overburden	S1408 J-4	36	-0.75	3.5	0.57	1.05	1.44	1.39	2.01	1.742010333	16.23	0.97	1.236002	-6.87456	4.88994			
723	8/16/02	lift soil	S1409 F-20	34.3	-3.36	2.39	0.35	0.74	0.62	0.99	0.97	1.236001618	15.83	2.41	1.460137	1.28898	5.81064			
724	8/16/02	lift soil	S1410 E.5-20.5	32.8	0.63	2.84	0.75	0.86	1.66	1.18	2.41	1.46013698	16.56	2.38	1.350926	-2.53704	5.25822			
725	8/16/02	lift soil	S1411 G.5-20.5	34.8	-1.24	2.57	-1.31	0.77	3.69	1.11	2.38	1.350925609	31.92	48.7	4.302894	29.68746	21.19656			
726	8/16/02	exclusion zone	S1412 I.5-10.25	31.4	14.51	10.36	44.17	2.82	4.53	3.25	48.7	4.302894375	3679.89	4206.71	562.3377	-9871.97	2487.118			
727	8/16/02	exclusion zone	S1413 I.75-10.5	39.3	-4825.01	1215.6	3752.32	369.48	454.39	423.92	4206.71	562.3376537	24.28	33	2.911099	14.19924	13.1967			
728	8/16/02	exclusion zone	S1414 J-11	26.6	6.94	6.45	20.51	1.81	12.49	2.28	33	2.911099449	13.37	-0.19	1.170684	5.19684	4.88994			
729	8/19/02	background	bkg081902	7.5	2.54	2.39	-0.69	0.67	0.5	0.96	-0.19	1.170683561	13.73	7.82	1.271417	-8.10216	5.60604			
730	8/19/02	soil standard	soilstd081902	36.9	-3.96	2.74	7.17	0.81	0.65	0.98	7.82	1.271416533	15.05	1.29	1.251	0.1023	5.05362			
731	8/20/02	background	bkg082002	7.5	0.05	2.47	-0.23	0.71	1.52	1.03	1.29	1.2509996	14.37	7.91	1.358713	12.50106	6.11754			
732	8/20/02	soil standard	soilstd082002	36.9	6.11	2.99	4.83	0.85	3.08	1.06	7.91	1.358712626	12.78	1.11	1.012126	2.2506	4.35798			
733	8/20/02	Pre EPA	S1415 I.5-K/9-10 S1416 I.5-K/10.5-12	33.6	1.1	2.13	1.27	0.62	-0.16	0.8	1.11	1.012126474	11.54	1.88	0.984073	-0.26598	4.1943			
734	8/20/02	Pre EPA		30.4	-0.13	2.05	1.67	0.6	0.21	0.78	1.88	0.984073168	175.06	720.71	26.75603	-360.423	127.7522			
735	8/20/02	exclusion zone	S1417 J.5/19	33.1	-176.16	62.44	630.26	17.58	90.45	20.17	720.71	26.75603296	365.46	2150.05	55.2721	-1135.8	265.714			
736	8/20/02	exclusion zone	S1418 I.75/19.5	33.7	-555.13	129.87	1944.61	36.45	205.44	41.55	2150.05	55.27209965	243.93	2084.9	37.90082	-1256.51	181.6439			
737	8/20/02	exclusion zone	S1419 J.75/18.5	29.6	-614.13	88.78	1889.85	25.03	195.05	28.46	2084.9	37.90082453	4510.86	10116.55	661.6582	-13574.6	2858.733			
738	8/20/02	exclusion zone	S1420 J.5/19.5	30.1	-6634.68	1397.23	6867.1	415.56	3249.45	514.88	10116.55	661.6581655	10.83	-0.12	0.866083	-2.31198	3.49866			
739	8/21/02	background	bkg082102	7.5	-1.13	1.71	0.3	0.51	-0.42	0.7	-0.12	0.866083137	15.47	7.1	1.372771	-0.47552	6.2403			
740	8/21/02	soil standard	soilstd082102	36.9	5.12	3.05	5.13	0.86	1.97	1.07	7.1	1.37277092	14.44	1.96	1.128007	-3.94878	4.72626			
741	8/21/02	EPA	S1421 I-J.5/9-12 EPA#1																	

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
756	8/26/02	soil standard	soilstd082602	36.9	-1.7	2.63	5.12	0.77	2.96	0.98	8.08	1.246314567	410.83	1774.85	64.64936	-1669.88	309.8462
757	8/26/02	exclusion zone	S1431 J.75/10.9 S1432 I.5- J.5/10.5-11.5	33.1	-816.17	151.44	1683.82	43.04	91.03	48.24	1774.85	64.64935576	11.47	3.32	1.020049	6.138	4.37844
758	8/26/02	Pre EPA	S1433 I.5-J.5/9.5- 10.5	33.1	3	2.14	1.7	0.62	1.62	0.81	3.32	1.020049018	13.18	1.23	1.096221	-1.57542	4.43982
759	8/26/02	Pre EPA	S1434 I-J.5/1-4	35	-0.77	2.17	-0.49	0.64	1.72	0.89	1.23	1.096220781	13.12	1.83	1.010198	-2.70072	4.05108
760	8/26/02	EPA Sand	S1435 I-J.5/4-7	35.1	-1.32	1.98	0.05	0.59	1.78	0.82	1.83	1.010198	10.94	0.85	0.836002	-0.77748	3.49866
761	8/26/02	EPA Sand	S1436 I-J.5/7-9.5 S1437 I.5-K/9.5- 11 EPA#1	35.8	-0.38	1.71	0.19	0.5	0.66	0.67	0.85	0.836002392	9.86	0.25	0.728011	-6.01524	3.04854
762	8/26/02	EPA Sand	S1438 I.5-K/9.5- 11 EPA#2	34.4	-2.94	1.49	0.5	0.44	-0.25	0.58	0.25	0.728010989	8.87	0.46	0.636003	9.24792	2.84394
763	8/26/02	EPA	S1439 I.5-K/9.5- 11 EPA#3	36.4	4.52	1.39	-0.5	0.38	0.96	0.51	0.46	0.636003145	12.51	2.04	1.05	-1.30944	4.31706
764	8/26/02	EPA	S1440 I.5-K/9.5- 11 EPA#4	37.5	-0.64	2.11	0.6	0.63	1.44	0.84	2.04	1.05	13.59	2.24	1.118302	-2.7621	4.54212
765	8/26/02	EPA	S1441 I.5-K/9.5- 11 EPA#5	37.7	-1.35	2.22	0.11	0.65	2.13	0.91	2.24	1.118302285	9.64	2.02	0.8	-2.57796	3.35544
766	8/26/02	EPA	bkg082702	36.4	-1.26	1.64	0.91	0.48	1.11	0.64	2.02	0.8	12.75	1.53	1.030049	3.84648	4.3989
767	8/26/02	EPA	soilstd082702	37.2	1.88	2.15	0.16	0.61	1.37	0.83	1.53	1.030048543	14.91	-0.34	1.25	7.01778	5.40144
768	8/27/02	background	bkg082802	7.5	3.43	2.64	0.11	0.75	-0.45	1	-0.34	1.25	13.96	7.11	1.296302	5.13546	5.70834
769	8/27/02	soil standard	soilstd082802	36.9	2.51	2.79	4.8	0.8	2.31	1.02	7.11	1.296302434	12.33	0.85	1.05603	-0.34782	4.31706
770	8/28/02	background	bkg082902	7.5	-0.17	2.11	1.07	0.64	-0.22	0.84	0.85	1.056030303	10.38	8.21	1.026158	2.8644	4.43982
771	8/28/02	soil standard	soilstd082902	36.9	1.4	2.17	5.09	0.63	3.12	0.81	8.21	1.026157883	16.29	-0.24	1.168289	2.20968	4.88994
772	8/29/02	background	bkg083002	7.5	1.08	2.39	-0.85	0.68	0.61	0.95	-0.24	1.168289348	16.69	7.02	1.43534	2.10738	6.4449
773	8/29/02	soil standard	soilstd083002	36.9	1.03	3.15	5.99	0.91	1.03	1.11	7.02	1.435339681	11.16	1.02	1.012571	0.04092	3.9897
774	8/30/02	background	bkg083002	7.5	0.02	1.95	-0.4	0.58	1.42	0.83	1.02	1.012570985	14.08	8.36	1.372771	-4.11246	5.97432
775	8/30/02	soil standard	soilstd083002	36.9	-2.01	2.92	6.37	0.86	1.99	1.07	8.36	1.37277092	14.38	1.48	1.194027	-7.28376	4.74672
776	8/30/02	EPA Sand	S1442 J.5-L/1-4	35.7	-3.56	2.32	0.57	0.71	0.91	0.96	1.48	1.1940268	15.92	1.99	1.298075	-2.31198	5.27868
777	8/30/02	EPA Sand	S1443 J.5-L/4-7 S1444 J.5-L/7- 9.5	36.8	-1.13	2.58	1.64	0.79	0.35	1.03	1.99	1.298075499	19.02	2.01	1.53688	3.5805	6.138
778	8/30/02	EPA Sand	S1445 I-L/9.5-11	35.6	1.75	3	-0.84	0.88	2.85	1.26	2.01	1.536879956	15.07	0.99	1.108016	9.63666	4.82856
779	8/30/02	EPA Sand	S1446 C-E/10-12	35.3	4.71	2.36	-0.44	0.66	1.43	0.89	0.99	1.108016245	13.56	1.06	1.076151	-0.38874	4.46028
780	8/30/02	EPA Sand	S1447 C-E/12-14	38	-0.19	2.18	0.86	0.66	0.2	0.85	1.06	1.076150547	11.38	0.28	0.85	6.6495	3.70326
781	8/30/02	EPA Sand	S1448 C-E/14-16	41.8	3.25	1.81	-0.01	0.51	0.29	0.68	0.28	0.85	12.47	1.84	1.072007	7.161	4.68534
782	8/30/02	EPA Sand	S1449 C-E/16-18	40.6	3.5	2.29	0.63	0.64	1.21	0.86	1.84	1.072007463	20.07	0.5	1.508012	-5.97432	5.99478
783	8/30/02	EPA Sand	S1450 C-E/18-20	36.7	-2.92	2.93	0.23	0.9	0.27	1.21	0.5	1.508011936	15.78	1.01	1.288099	2.39382	5.5242
784	8/30/02	EPA Sand	S1451 C-E/20-21	36.3	1.17	2.7	0.36	0.76	0.65	1.04	1.01	1.288099375	9.94	3.11	0.926553	-4.8081	3.62142
785	8/30/02	EPA Sand	bkg090302	33	-2.35	1.77	0.15	0.53	2.96	0.76	3.11	0.926552751	12.09	0.82	0.980051	0.96162	4.01016
786	9/3/02	background	soilstd090302	7.5	0.47	1.96	0.13	0.58	0.69	0.79	0.82	0.980051019	11.68	8.65	1.05423	-2.47566	4.48074
787	9/3/02	soil standard	bkg090402	36.9	-1.21	2.19	4.97	0.65	3.68	0.83	8.65	1.054229577	11.62	0.71	1.086002	-0.26598	4.56258
788	9/4/02	background	soilstd090402	7.5	-0.13	2.23	1.4	0.65	-0.69	0.87	0.71	1.086001842	12.97	8.39	1.246315	1.88232	5.44236
789	9/4/02	soil standard		36.9	0.92	2.66	5.08	0.77	3.31	0.98	8.39	1.246314567	46.27	210.33	6.942622	-83.3745	33.57486
790	9/4/02	exclusion zone	S1452 L.25-6	26.3	-40.75	16.41	193.04	4.6	17.29	5.2	210.33	6.942621983	49.67	240.55	7.30302	-129.103	35.25258

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
791	9/4/02	exclusion zone	S1453 L.25-6.25	27.2	-63.1	17.23	224.47	4.85	16.08	5.46	240.55	7.303019923	2275.67	7409.36	339.6033	-7274.57	1526.152
792	9/4/02	QC	S1454 K-18.5	28.1	-3555.51	745.92	5421.13	216.24	1988.23	261.86	7409.36	339.6032939	35.83	242.06	5.250924	-26.3116	24.87936
793	9/4/02	QC	S1455 G.5-H/20-21	31.8	-12.86	12.16	193.12	3.39	48.94	4.01	242.06	5.250923728	20.08	40.25	2.56632	-9.26838	12.13278
794	9/4/02	QC	S1456 L.5/5.75-6.5	29.9	-4.53	5.93	37.42	1.68	2.83	1.94	40.25	2.566320323	11.51	-0.35	0.958019	3.2736	4.17384
795	9/5/02	background	bkg090502	7.5	1.6	2.04	0.55	0.57	-0.9	0.77	-0.35	0.958018789	17.2	8.11	1.564864	-5.38098	6.71088
796	9/5/02	soil standard	soilstd090502	36.9	-2.63	3.28	5.06	0.98	3.05	1.22	8.11	1.564864211	13.11	2.57	1.092016	4.23522	4.74672
797	9/5/02	EPA	S1457 L- L.75/5.75-6.5 EPA#1	24.4	2.07	2.32	1.41	0.66	1.16	0.87	2.57	1.092016483	13.7	3.74	1.142016	2.6598	4.9104
798	9/5/02	EPA	S1458 L- L.75/5.75-6.5 EPA#2	27.8	1.3	2.4	1.99	0.69	1.75	0.91	3.74	1.142015762	10.74	4.34	0.958019	3.15084	4.03062
799	9/5/02	EPA	S1459 L- L.75/5.75-6.5 EPA#3	28.1	1.54	1.97	1.75	0.57	2.59	0.77	4.34	0.958018789	10.88	4.42	0.95	-2.06646	3.96924
800	9/5/02	EPA	S1460 L- L.75/5.75-6.5 EPA#4	27	-1.01	1.94	2.21	0.57	2.21	0.76	4.42	0.95	12.11	3.84	1.062121	1.47312	4.54212
801	9/5/02	EPA	S1461 L- L.75/5.75-6.5 EPA#5	29.1	0.72	2.22	2.63	0.65	1.21	0.84	3.84	1.06212052	12.75	1.69	1.080046	-4.01016	4.41936
802	9/5/02	EPA Sand	S1462 I-L/11-12	33.1	-1.96	2.16	0.72	0.64	0.97	0.87	1.69	1.080046295	13.97	0.6	1.092016	0.1023	4.54212
803	9/5/02	EPA Sand	S1463 I-L/12-13	33.6	0.05	2.22	0.18	0.66	0.42	0.87	0.6	1.092016483	14.31	1.96	1.34618	-0.65472	5.44236
804	9/5/02	EPA Sand	S1464 I-L/13-14	33.7	-0.32	2.66	0.63	0.79	1.33	1.09	1.96	1.34617978	26.7	1.45	2.004196	2.41428	8.75688
805	9/5/02	EPA Sand	S1465 I-L/14-15	34.4	1.18	4.28	0.03	1.18	1.42	1.62	1.45	2.004195599	22.19	2.44	1.972004	-5.07408	7.79526
806	9/5/02	EPA Sand	S1466 I-L/15-16	33.4	-2.48	3.81	0.01	1.18	2.43	1.58	2.44	1.972004057	16.99	2.61	1.444022	-7.50882	5.85156
807	9/5/02	EPA Sand	S1467 I-L/16-17.5	30.8	-3.67	2.86	0.96	0.86	1.65	1.16	2.61	1.44402216	17.79	2.1	1.472005	-3.19176	6.01524
808	9/5/02	EPA Sand	S1468 L-N/1-3	32.8	-1.56	2.94	0.83	0.88	1.27	1.18	2.1	1.472005435	17.38	2.21	1.434503	-7.4679	5.66742
809	9/5/02	EPA Sand	S1469 L-N/3-5	25.8	-3.65	2.77	-0.16	0.83	2.37	1.17	2.21	1.434503398	16.61	7.31	1.388416	-2.70072	5.9334
810	9/5/02	exclusion zone	S1470 M-8.1	27.6	-1.32	2.9	5.14	0.86	2.17	1.09	7.31	1.388416364	15.24	5.9	1.456022	0.87978	6.26076
811	9/5/02	Pre EPA	S1471 L.5/5.75-6.5	31	0.43	3.06	3.5	0.88	2.4	1.16	5.9	1.456021978	15.49	1.78	1.410142	-6.28122	5.4219
812	9/5/02	lift soil	S1472 K.5-17.5	31.4	-3.07	2.65	0.8	0.83	0.98	1.14	1.78	1.410141837	13.73	0.35	1.148564	-1.59588	4.64442
813	9/6/02	background	bkg090602	7.5	-0.78	2.27	-0.66	0.66	1.01	0.94	0.35	1.148564321	10.22	7.08	0.880909	0.98208	3.92832
814	9/6/02	soil standard	soilstd090602	36.9	0.48	1.92	5.99	0.56	1.09	0.68	7.08	0.880908622	13.64	1.79	1.142016	8.65458	4.95132
815	9/6/02	overburden	S1473 J.5/7 OB#1	31.5	4.23	2.42	0.94	0.69	0.85	0.91	1.79	1.142015762	11.47	3.63	1.208015	-2.49612	4.86948
816	9/6/02	overburden	S1474 J.5/6 OB#2	34.7	-1.22	2.38	1.99	0.72	1.64	0.97	3.63	1.208014901	14.3	1.89	1.144028	3.19176	4.7058
817	9/6/02	overburden	S1475 J.5/5 OB#3	33.9	1.56	2.3	0.47	0.68	1.42	0.92	1.89	1.144027972	13.07	2.5	1.084066	-1.7391	4.58304
818	9/6/02	overburden	S1476 J.5/4 OB#4	35.3	-0.85	2.24	1.64	0.66	0.86	0.86	2.5	1.084066419	17.23	2.11	1.386001	-1.20714	5.79018
819	9/6/02	overburden	S1477 J.5/4 OBQC	34.6	-0.59	2.83	0.99	0.83	1.12	1.11	2.11	1.386001443	15.15	-0.59	1.174138	-0.02046	5.0127
820	9/9/02	background	bkg090902	7.5	-0.01	2.45	0.15	0.69	-0.74	0.95	-0.59	1.174137982	12.84	7.62	1.188486	3.86694	5.2173
821	9/9/02	soil standard	soilstd090902	36.9	1.89	2.55	5.64	0.74	1.98	0.93	7.62	1.188486432	13.38	-0.38	1.040433	2.39382	4.3989

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
822	9/10/02	background	bkg091002	7.5	1.17	2.15	-1	0.6	0.62	0.85	-0.38	1.040432602	11.88	8.39	1.112115	4.95132	4.84902
823	9/10/02	soil standard	soilstd091002	36.9	2.42	2.37	4.32	0.68	4.07	0.88	8.39	1.112115102	12.38	0.16	0.956033	-13.0126	3.7851
824	9/11/02	background	bkg091102	7.5	-6.36	1.85	0.71	0.58	-0.55	0.76	0.16	0.956033472	10.35	8.76	0.962133	8.42952	4.25568
825	9/11/02	soil standard	soilstd091102	36.9	4.12	2.08	5.29	0.59	3.47	0.76	8.76	0.962133047	11.73	2.09	0.922009	-2.51658	3.84648
826	9/11/02	Pre EPA	S1478 7-8.5/M-N S1479 8.5-	33.5	-1.23	1.88	0.78	0.55	1.31	0.74	2.09	0.922008677	9.62	2.4	0.818413	8.40906	3.41682
827	9/11/02	Pre EPA	10.5/M-N S1480 N.2-10.2	32.1	4.11	1.67	-0.7	0.47	3.1	0.67	2.4	0.818413099	12.9	2.48	1.114002	10.06632	4.86948
828	9/11/02	exclusion zone	North Wall S1481 L.5-N/7-9	26.4	4.92	2.38	1.19	0.67	1.29	0.89	2.48	1.114001795	12.68	0.96	1.05	5.66742	4.46028
829	9/11/02	EPA	EPA#1 S1482 L.5-N/7-9	31.8	2.77	2.18	0.29	0.63	0.67	0.84	0.96	1.05	12.06	1.58	0.958019	-8.184	3.72372
830	9/11/02	EPA	EPA#2 S1483 L.5-N/7-9	32.8	-4	1.82	-0.01	0.57	1.59	0.77	1.58	0.958018789	10.4	1.48	0.852115	-2.43474	3.51912
831	9/11/02	EPA	EPA#3 S1484 L.5-N/7-9	34.1	-1.19	1.72	0.16	0.5	1.32	0.69	1.48	0.852115016	11.49	1.26	0.914002	-2.98716	3.70326
832	9/11/02	EPA	EPA#4 S1485 L.5-N/7-9	35	-1.46	1.81	0.65	0.55	0.61	0.73	1.26	0.914002188	11.38	1.57	1.010198	3.13038	4.092
833	9/11/02	EPA	EPA#5 S1486 L.5-N/9-	34.6	1.53	2	0.02	0.59	1.55	0.82	1.57	1.010198	10.27	0.43	0.79404	-0.38874	3.33498
834	9/11/02	EPA	10.5 EPA#1 S1487 L.5-N/9-	35.8	-0.19	1.63	0.19	0.47	0.24	0.64	0.43	0.794040301	10.43	1.09	0.90802	1.30944	3.7851
835	9/11/02	EPA	10.5 EPA#2 S1488 L.5-N/9-	35.3	0.64	1.85	1	0.54	0.09	0.73	1.09	0.908019824	11.94	2.04	1.016071	4.3989	4.21476
836	9/11/02	EPA	10.5 EPA#3 S1489 L.5-N/9-	36.1	2.15	2.06	0.26	0.6	1.78	0.82	2.04	1.016070864	6.33	2.28	0.530094	-4.97178	2.08692
837	9/11/02	EPA	10.5 EPA#4 S1490 L.5-N/9-	35.2	-2.43	1.02	-0.04	0.31	2.32	0.43	2.28	0.530094331	12.04	1.69	0.938136	-3.49866	3.86694
838	9/11/02	EPA	10.5 EPA#5 S1491 L-N/5-7	35.7	-1.71	1.89	-0.11	0.55	1.8	0.76	1.69	0.938136451	17.24	0.11	1.312098	-0.77748	5.70834
839	9/11/02	EPA Sand	S1491 L-N/5-7	33.2	-0.38	2.79	1.08	0.8	-0.97	1.04	0.11	1.312097557	15.71	0.18	1.208015	0.65472	5.13546
840	9/11/02	EPA Sand	S1492 L-N/7-9	34.6	0.32	2.51	0.06	0.72	0.12	0.97	0.18	1.208014901	12.72	0.99	1.040433	12.70566	4.58304
841	9/11/02	EPA Sand	S1493 L-N/9-11 S1494 N-10	34.6	6.21	2.24	-0.14	0.6	1.13	0.85	0.99	1.040432602	64.22	240.66	9.273732	-186.493	44.1936
842	9/11/02	exclusion zone	North Wall	25.9	-91.15	21.6	225.01	6.14	15.65	6.95	240.66	9.273731719	12.37	-0.67	0.893085	6.3426	3.76464
843	9/12/02	background	bkg091202	7.5	3.1	1.84	-1.66	0.5	0.99	0.74	-0.67	0.893084542	13.84	8.77	1.372771	-6.2403	5.79018
844	9/12/02	soil standard	soilstd091202	36.9	-3.05	2.83	6.26	0.86	2.51	1.07	8.77	1.37277092	13.62	0.43	1.102089	-6.56766	4.43982
845	9/13/02	background	bkg091302	7.5	-3.21	2.17	1.01	0.65	-0.58	0.89	0.43	1.102088926	10.93	7.43	1.012126	10.3323	4.46028
846	9/13/02	soil standard	soilstd091302	36.9	5.05	2.18	3.72	0.62	3.71	0.8	7.43	1.012126474	27.27	69.37	3.474162	-7.07916	16.55214
847	9/13/02	exclusion zone	S1495 L-19	31.7	-3.46	8.09	59.58	2.27	9.79	2.63	69.37	3.474161769	16.21	-0.15	1.380036	-4.092	5.48328
848	9/16/02	background	bkg091602	7.5	-2	2.68	1.17	0.82	-1.32	1.11	-0.15	1.380036231	12.5	8.31	1.196328	2.3529	5.2173
849	9/16/02	soil standard	soilstd091602	36.9	1.15	2.55	5.22	0.74	3.09	0.94	8.31	1.196327714	12.45	-0.12	0.956033	-10.7824	3.86694
850	9/17/02	background	bkg091702	7.5	-5.27	1.89	1.58	0.58	-1.7	0.76	-0.12	0.956033472	15.12	7.92	1.38058	1.57542	5.97432
851	9/17/02	soil standard	soilstd091702	36.9	0.77	2.92	5.57	0.86	2.35	1.08	7.92	1.380579588	16.67	0.32	1.442671	0.36828	5.64696
852	9/18/02	background	bkg091802	7.5	0.18	2.76	-0.96	0.83	1.28	1.18	0.32	1.442671134	11.03	8.47	1.052616	5.34006	4.66488
853	9/18/02	soil standard	soilstd091802	36.9	2.61	2.28	5.7	0.66	2.77	0.82	8.47	1.052615789	21.17	11.19	2.331738	-1.96416	10.51644
854	9/18/02	exclusion zone	S1496 G.5/21.5	31	-0.96	5.14	9.4	1.47	1.79	1.81	11.19	2.33173755	18.88	11.77	1.704142	5.36052	7.52928
855	9/18/02	exclusion zone	S1497 G.5/22 S1498 L-L/17.5-	30.5	2.62	3.68	6.03	1.04	5.74	1.35	11.77	1.704142013	12.42	1.14	0.972008	-0.49104	4.092
856	9/18/02	Pre EPA	19 #1	32.1	-0.24	2	0.53	0.58	0.61	0.78	1.14	0.97200823	13.51	1.51	1.130044	-1.20714	4.76718

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
857	9/18/02	Pre EPA	S1499 I-L/17.5-19 #2	32.9	-0.59	2.33	0.46	0.67	1.05	0.91	1.51	1.130044247	14.75	-0.01	1.062544	5.87202	4.52166
858	9/19/02	background	bkg091902	7.5	2.87	2.21	-1.37	0.61	1.36	0.87	-0.01	1.062544117	12.25	8.24	1.120045	5.66742	4.72626
859	9/19/02	soil standard	soilstd091902	36.9	2.77	2.31	3	0.68	5.24	0.89	8.24	1.120044642	18.59	8.72	1.660271	-16.2657	6.73134
860	9/19/02	EPA	K-18.5 SPOT	35.8	-7.95	3.29	5.54	1.02	3.18	1.31	8.72	1.660271062	17.59	7.09	1.572673	12.19416	7.161
861	9/19/02	EPA	K-18.5 SPOT2	35.8	5.96	3.5	5.06	0.98	2.03	1.23	7.09	1.572672884	23.75	4.43	1.98658	1.41174	8.71596
862	9/19/02	EPA	K-18.5 SPOT3	36.4	0.69	4.26	3.99	1.23	0.44	1.56	4.43	1.986579976	12.57	1.33	0.960208	1.2276	4.05108
863	9/19/02	EPA Sand	S1503 L-N/11-13	36	0.6	1.98	-0.09	0.56	1.42	0.78	1.33	0.960208311	10.35	1.98	0.838153	0.24552	3.4782
864	9/19/02	EPA Sand	S1504 L-N/13-15	34.7	0.12	1.7	0.32	0.49	1.66	0.68	1.98	0.838152731	10.46	1.47	0.880057	5.2173	3.82602
865	9/19/02	EPA Sand	S1505 L-N/15-17	34.7	2.55	1.87	0.54	0.52	0.93	0.71	1.47	0.880056816	12.15	0.85	0.972008	-2.02554	4.03062
866	9/19/02	EPA Sand	S1506 L-N/17-19	32.7	-0.99	1.97	0.26	0.58	0.59	0.78	0.85	0.97200823	12.93	2.28	1.134637	2.70072	4.64442
867	9/19/02	EPA Sand	S1507 L-N/19-21	35.6	1.32	2.27	-0.55	0.65	2.83	0.93	2.28	1.134636506	14.03	0.32	1.030049	2.4552	4.5012
868	9/19/02	EPA Sand	S1508 I-L/17-19	33.7	1.2	2.2	-0.12	0.61	0.44	0.83	0.32	1.030048543	18.13	1.34	1.456606	-3.5805	5.91294
869	9/19/02	EPA Sand	S1509 I-L/19-21	34.8	-1.75	2.89	0.2	0.84	1.14	1.19	1.34	1.456605643	10.61	0.22	0.79404	2.43474	3.3759
870	9/19/02	EPA	S1510 I-J.5/17.5-19 EPA#1	35.1	1.19	1.65	-0.11	0.47	0.33	0.64	0.22	0.794040301	12.65	1.46	1.040433	4.46028	4.35798
871	9/19/02	EPA	S1511 I-J.5/17.5-19 EPA#2	34.1	2.18	2.13	-0.1	0.6	1.56	0.85	1.46	1.040432602	11.92	1.2	0.994032	-3.02808	4.07154
872	9/19/02	EPA	S1512 I-J.5/17.5-19 EPA#3	32.1	-1.48	1.99	0.48	0.59	0.72	0.8	1.2	0.994032193	12.55	2.15	1.036002	-5.60604	4.17384
873	9/19/02	EPA	S1513 I-J.5/17.5-19 EPA#4	35	-2.74	2.04	1.04	0.62	1.11	0.83	2.15	1.036001931	9.75	0.71	0.766094	5.7288	3.29406
874	9/19/02	EPA	S1514 I-J.5/17.5-19 EPA#5	34.2	2.8	1.61	-0.36	0.45	1.07	0.62	0.71	0.766093989	10.74	0.36	0.836002	-0.34782	3.60096
875	9/19/02	EPA	S1515 J.5-L/17.5-19 EPA#1	34	-0.17	1.76	0.49	0.5	-0.13	0.67	0.36	0.836002392	11.82	3.1	1.058017	3.9897	4.33752
876	9/19/02	EPA	S1516 J.5-L/17.5-19 EPA#2	33.1	1.95	2.12	0.56	0.63	2.54	0.85	3.1	1.058017013	11.46	2.17	0.914002	-1.3299	3.8874
877	9/19/02	EPA	S1517 J.5-L/17.5-19 EPA#3	34	-0.65	1.9	0.82	0.55	1.35	0.73	2.17	0.914002188	14.56	2.77	1.248079	-4.17384	5.0127
878	9/19/02	EPA	S1518 J.5-L/17.5-19 EPA#4	32	-2.04	2.45	1.55	0.76	1.22	0.99	2.77	1.248078523	16.78	2.69	1.396173	-0.98208	5.79018
879	9/19/02	EPA	S1519 J.5-L/17.5-19 EPA#5	34	-0.48	2.83	-0.23	0.82	2.92	1.13	2.69	1.396173342	19.1	0.07	1.600781	0.87978	6.46536
880	9/20/02	background	bkg092002	7.5	0.43	3.16	-0.56	0.92	0.63	1.31	0.07	1.600781059	12.61	8.72	1.148085	-9.63666	4.78764
881	9/20/02	soil standard	soilstd092002	36.9	-4.71	2.34	5.21	0.7	3.51	0.91	8.72	1.148085363	14.57	-0.32	1.11018	6.79272	4.93086
882	9/23/02	background	bkg092302	7.5	3.32	2.41	-0.7	0.65	0.38	0.9	-0.32	1.110180166	12.02	6.8	1.05423	3.64188	4.66488
883	9/23/02	soil standard	soilstd092302	36.9	1.78	2.28	4.64	0.65	2.16	0.83	6.8	1.054229577	14.5	-1.47	1.026158	-0.67518	4.3989
884	9/24/02	background	bkg092402	7.5	-0.33	2.15	0.33	0.63	-1.8	0.81	-1.47	1.026157883	13.03	9.06	1.170043	1.65726	5.05362
885	9/24/02	soil standard	soilstd092402	36.9	0.81	2.47	4.58	0.71	4.48	0.93	9.06	1.170042734	12.98	-0.18	0.982293	0.22506	4.11246
886	9/25/02	background	bkg092502	7.5	0.11	2.01	-0.3	0.57	0.12	0.8	-0.18	0.982293235	12.68	7.25	1.146342	2.00508	5.05362
887	9/25/02	soil standard	soilstd092502	36.9	0.98	2.47	5.17	0.71	2.08	0.9	7.25	1.146342008	15.43	2.01	1.226418	0.96162	5.09454

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Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
888	9/25/02	EPA Sand	S1520 J-N/21-22	34.4	0.47	2.49	0.41	0.71	1.6	1	2.01	1.226417547	9.82	1.71	0.8	-7.93848	3.1713
889	9/25/02	EPA Sand	S1521 J-N/22-23	35.1	-3.88	1.55	1.04	0.48	0.67	0.64	1.71	0.8	12.75	2.49	1.11252	-6.26076	4.41936
890	9/25/02	EPA Sand	S1522 J-N/23-24	33.2	-3.06	2.16	0.71	0.64	1.78	0.91	2.49	1.112519663	10.15	1.92	0.85	-3.94878	3.49866
891	9/25/02	EPA Sand	S1523 J-N/24-25	33.9	-1.93	1.71	1.12	0.51	0.8	0.68	1.92	0.85	10.65	1.31	0.79404	-3.04854	3.31452
892	9/25/02	EPA Sand	S1524 J-N/25-26	36.5	-1.49	1.62	0.1	0.47	1.21	0.64	1.31	0.794040301	13.58	2.35	1.242014	-1.6368	5.15592
893	9/25/02	EPA Sand	S1525 J-N/26-27	33	-0.8	2.52	1.67	0.75	0.68	0.99	2.35	1.242014493	16.35	1.21	1.292749	1.10484	5.40144
894	9/25/02	EPA Sand	S1526 F-H/24.5-27	34.4	0.54	2.64	-0.23	0.74	1.44	1.06	1.21	1.292749009	14.94	1.98	1.220656	-1.20714	4.86948
895	9/25/02	EPA Sand	S1527 D-F/24.5-27	35	-0.59	2.38	-0.23	0.7	2.21	1	1.98	1.220655562	12.25	0.88	1.012126	-5.34006	4.25568
896	9/25/02	EPA Sand	S1528 H-J/24.5-27	36.4	-2.61	2.08	1.88	0.62	-1	0.8	0.88	1.012126474	11.87	-0.1	0.966075	-2.47566	3.92832
897	9/26/02	background	bkg092602	7.5	-1.21	1.92	-0.29	0.57	0.19	0.78	-0.1	0.966074531	13.57	9.45	1.284056	6.01524	5.6265
898	9/26/02	soil standard	soilstd092602	36.9	2.94	2.75	5.21	0.78	4.24	1.02	9.45	1.284056074	23.99	28.52	2.527449	2.57796	11.5599
899	9/26/02	exclusion zone	S1529 G.5/24.2 S1530	31.4	1.26	5.65	20.33	1.62	8.19	1.94	28.52	2.527449307	15.94	8.42	1.432236	1.45266	6.2403
900	9/26/02	exclusion zone	G.75/23.75	24	0.71	3.05	4.5	0.88	3.92	1.13	8.42	1.432236014	11.13	-0.02	0.860233	2.10738	3.56004
901	9/30/02	background	bkg093002	7.5	1.03	1.74	-0.46	0.5	0.44	0.7	-0.02	0.860232527	11.98	7.94	1.094806	6.01524	4.95132
902	9/30/02	soil standard	soilstd093002	36.9	2.94	2.42	6.63	0.69	1.31	0.85	7.94	1.094805919	27.2	35.02	3.14587	11.78496	14.79258
903	9/30/02	exclusion zone	S1531 C.1-24 S1532 G-H.5/20-22.5 EPA#1	21.9	5.76	7.23	26.82	2.01	8.2	2.42	35.02	3.145870309	13.37	1.32	1.018332	1.45266	4.17384
904	9/30/02	EPA	S1533 G-H.5/20-22.5 EPA#2	34.9	0.71	2.04	-0.87	0.59	2.19	0.83	1.32	1.018331969	9.47	1.48	0.706045	-8.98194	2.82348
905	9/30/02	EPA	S1534 G-H.5/20-22.5 EPA#3	34.8	-4.39	1.38	0.55	0.43	0.93	0.56	1.48	0.706045324	9.8	2.03	0.816088	-4.01016	3.31452
906	9/30/02	EPA	S1535 G-H.5/20-22.5 EPA#4	33.8	-1.96	1.62	0.54	0.48	1.49	0.66	2.03	0.816088231	10.11	1.35	0.83006	1.20714	3.43728
907	9/30/02	EPA	S1536 G-H.5/20-22.5 EPA#5	35.4	0.59	1.68	0.21	0.49	1.14	0.67	1.35	0.830060239	12.34	1.91	1.040433	-0.57288	4.25568
908	9/30/02	EPA	S1537 G-H.5/22.5-24.5 EPA#1	34.6	-0.28	2.08	0.17	0.6	1.74	0.85	1.91	1.040432602	12.39	2.23	1.074151	1.1253	4.3989
909	9/30/02	EPA	S1538 G-H.5/22.5-24.5 EPA#2	34.1	0.55	2.15	0.57	0.63	1.66	0.87	2.23	1.074150827	13.79	1.76	1.118302	6.40398	4.7058
910	9/30/02	EPA	S1539 G-H.5/22.5-24.5 EPA#3	33.9	3.13	2.3	-0.2	0.65	1.96	0.91	1.76	1.118302285	12.81	2.22	1.080046	-1.71864	4.37844
911	9/30/02	EPA	S1540 G-H.5/22.5-24.5 EPA#4	33.4	-0.84	2.14	0.38	0.64	1.84	0.87	2.22	1.080046295	13.26	1.67	1.178898	7.34514	4.88994
912	9/30/02	EPA	S1541 G-H.5/22.5-24.5 EPA#5	26.9	3.59	2.39	-1	0.67	2.67	0.97	1.67	1.17889779	12.13	1.3	1.010198	7.48836	4.2966
913	9/30/02	EPA		33.4	3.66	2.1	0.32	0.59	0.98	0.82	1.3	1.010198	16.87	1.69	1.286002	-6.91548	5.17638

Nutranl Gamma Spec Report- 341 East Ohio Street Site

Complete File of Nutranl Samples

Sample	Sample	Sample	Description	Weight	U-238	U-238	Th-232	Th-232	Ra-226	Ra-226	Total Radium	Total Radium					
ID	Date	Group			Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty	Activity	Uncertainty					
914	9/30/02	EPA Sand	S1542 A-C.5/21-22	32.2	-3.38	2.53	0.15	0.77	1.54	1.03	1.69	1.286001555	14.17	0.88	1.070047	-3.23268	4.43982
915	9/30/02	EPA Sand	S1543 A-B.5/25-27	35.1	-1.58	2.17	0.95	0.65	-0.07	0.85	0.88	1.070046728	13.37	1.11	1.1	-1.41174	4.46028
916	9/30/02	EPA Sand	S1544 B.5-D/25-27	31.6	-0.69	2.18	0.22	0.66	0.89	0.88	1.11	1.1	15.92	1.96	1.338096	-10.6597	5.36052
917	9/30/02	EPA Sand	S1545 I-J/21-24	33.8	-5.21	2.62	0.73	0.79	1.23	1.08	1.96	1.338095662	10.86	-0.88	0.826196	11.19162	3.74418
918	10/1/02	background	bkg100102	7.5	5.47	1.83	0.28	0.51	-1.16	0.65	-0.88	0.826196103	9.56	8.55	0.860523	-7.7748	3.72372
919	10/1/02	soil standard	soilstd100102	36.9	-3.8	1.82	6.24	0.54	2.31	0.67	8.55	0.860523097	10.47	0.19	0.786003	0.16368	3.25314
920	10/1/02	EPA	S1546 B.5-D/23.5-25 EPA#1	31.9	0.08	1.59	0.07	0.47	0.12	0.63	0.19	0.786002545	10.03	1.28	0.788162	6.4449	3.39636
921	10/1/02	EPA	S1547 B.5-D/23.5-25 EPA#2	33.6	3.15	1.66	-0.15	0.46	1.43	0.64	1.28	0.78816242	9.4	0.71	0.720069	-0.1023	3.08946
922	10/1/02	EPA	S1548 B.5-D/23.5-25 EPA#3	33.9	-0.05	1.51	1.05	0.44	-0.34	0.57	0.71	0.720069441	9.22	1.98	0.818413	6.6495	3.41682
923	10/1/02	EPA	S1549 B.5-D/23.5-25 EPA#4	323	3.25	1.67	0.3	0.47	1.68	0.67	1.98	0.818413099	11.17	1.86	0.922009	-0.18414	3.76464
924	10/1/02	EPA	S1550 B.5-D/23.5-25 EPA#5	32.6	-0.09	1.84	0.4	0.55	1.46	0.74	1.86	0.922008677	15.81	1.43	1.214907	-1.55496	4.78764
925	10/1/02	EPA Sand	S1551 A-D/22-23	32.6	-0.76	2.34	-1.77	0.66	3.2	1.02	1.43	1.214907404	18.26	-0.56	1.324122	13.56498	5.9334
926	10/1/02	EPA Sand	S1552 A-D/23-25	32.8	6.63	2.9	-0.01	0.78	-0.55	1.07	-0.56	1.324122351	13.43	2.3	1.120714	-2.57796	4.5012
927	10/1/02	EPA Sand	S1553 C.5-G/21-22	32.9	-1.26	2.2	0.04	0.64	2.26	0.92	2.3	1.120714058	17.95	0.63	1.436802	8.63412	6.4449
928	10/1/02	EPA Sand	S1554 D-G/22-23	35	4.22	3.15	1.16	0.9	-0.53	1.12	0.63	1.436802004	12.88	0.69	0.970052	-15.1199	3.76464
929	10/1/02	EPA Sand	S1555 D-G/23-24.5	33.7	-7.39	1.84	1.35	0.59	-0.66	0.77	0.69	0.970051545	13.93	1.79	1.090413	-11.3962	4.07154
930	10/1/02	EPA Sand	S1556 G-I/20-21	33.8	-5.57	1.99	-1.06	0.63	2.85	0.89	1.79	1.090412766	15.22	0.87	1.158016	0.38874	4.72626
931	10/1/02	EPA Sand	S1557 G-H/21-24.5	32.3	0.19	2.31	-0.38	0.69	1.25	0.93	0.87	1.158015544	13.38	1.93	1.05603	-4.01016	4.41936
932	10/1/02	EPA Sand	S1558 H-I/21-24.5	33.9	-1.96	2.16	1.5	0.64	0.43	0.84	1.93	1.056030303	13.92	8.88	1.274402	-1.98462	5.50374
933	10/3/02	soil standard	soilstd100302	36.9	-0.97	2.69	5.44	0.79	3.44	1	8.88	1.27440182					

RSSI Gamma Spectroscopy

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RSSI High Resolution Gamma Spectroscopy Analysis

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Quantum Technology
GDR_C Nuclide Activity Summary

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Sample ID: 023328 STS PROJECT# TRS B.5-D/23.5-25

Sample Size 8.92e+002 g | Spectrum File . . h:\pcaspec\023328.spm
Sampling Start.00-00-00 00:00 | Counting Start. 10-03-02 10:45
Sampling Stop00-00-00 00:00 | Buildup Time. 0.00e+000 Hrs
Current Date.00-00-00 00:00 | Decay Time [OFF]. 0.00e+000 Hrs

Efficiency File:h:\gdr\eff\500mar.eff | Library File. . . h:\gdr\lib\nuthk.lib
ID.500mar | ID. U & Th Natural Series + K

Eff.= 1/[7.31e-002*En^-2.40e+000 + 7.89e+001*En^8.95e-001] 04-26-02 12:00

Gamma Fraction Limit >= . . . 71.00 % | Decay Limit <=. . . . 8.000 Halflives
Library Energy Tolerance. . . 1.20

FINAL ACTIVITY REPORT

Nuclide	Energy (keV)	Conc +/- 1.00sigma (uCi/g)	Half-life (hrs)	Peaks Found
U-234	53.20	I.D.Only	2.14e+009	1 of 1
K-40	1460.80	8.84e-006 +/-3.32e-007	1.12e+013	1 of 1
TOTAL:		8.84e-006 uCi/g		

UNKNOWN PEAKS

Energy (keV)	Centroid Channel	Net Counts	Un- Certainty	C.L. Counts	Bkg. Counts	FWHM (keV)	Net Gamma/sec
238.74	985.50	301	54	104	603	1.73	2.021e+000
295.28	1216.34	203	38	71	257	1.59	1.570e+000
351.79	1447.08	241	38	71	217	1.16	2.134e+000
583.08	2391.52	111	25	46	106	2.04	1.509e+000
609.39	2498.94	168	27	48	104	2.39	2.375e+000

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RSSI High Resolution Gamma Spectroscopy Analysis

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Quantum Technology
GDR_C Nuclide Activity Summary

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Sample ID: 023329 STS PROJECT# TRS G-H.S/20-22.5

Sample Size 8.40e+002 g | Spectrum File . . H:\PCASPEC\023329.SPM
Sampling Start.00-00-00 00:00 | Counting Start. 10-03-02 11:58
Sampling Stop00-00-00 00:00 | Buildup Time. 0.00e+000 Hrs
Current Date.00-00-00 00:00 | Decay Time [OFF]. 0.00e+000 Hrs

Efficiency File.h:\gdr\eff\500mar.eff | Library File. . . .h:\gdr\lib\nuthk.lib
ID.500mar | ID. U & Th Natural Series + K

Eff.= 1/[7.31e-002*En^-2.40e+000 + 7.89e+001*En^8.95e-001] 04-26-02 12:00

Gamma Fraction Limit >= . . . 71.00 % | Decay Limit <=. . . . 8.000 Halflives
Library Energy Tolerance. . . 1.20

FINAL ACTIVITY REPORT

Nuclide	Energy (keV)	Conc +- 1.00sigma (uCi/g)	Half-life (hrs)	Peaks Found
U-234	53.20	I.D.Only	2.14e+009	1 of 1
K-40	1460.80	9.13e-006 +-3.54e-007	1.12e+013	1 of 1
TOTAL:		9.13e-006 uCi/g		

UNKNOWN PEAKS

Energy (keV)	Centroid Channel	Net Counts	Un- Certainty	C.L. Counts	Bkg. Counts	FWHM (keV)	Net Gamma/sec
238.55	984.73	372	53	101	532	0.97	2.496e+000
295.16	1215.84	190	33	61	203	2.18	1.469e+000
351.96	1447.79	214	33	59	193	1.40	1.895e+000
583.27	2392.30	103	23	42	80	1.54	1.401e+000
609.41	2499.04	197	27	44	99	1.73	2.785e+000

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RSSI High Resolution Gamma Spectroscopy Analysis

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Quantum Technology
GDR_C Nuclide Activity Summary

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Sample ID: 023330 STS PROJECT# TRS C.1-24

Sample Size 8.78e+002 g | Spectrum File . . H:\PCASPEC\023330.SPM
Sampling Start. 00-00-00 00:00 | Counting Start. 10-03-02 01:12
Sampling Stop 00-00-00 00:00 | Buildup Time. 0.00e+000 Hrs
Current Date. 00-00-00 00:00 | Decay Time [OFF]. 0.00e+000 Hrs

Efficiency File:h:\gdr\eff\500mar.eff | Library File. . . .h:\gdr\lib\nuthk.lib
ID. 500mar | ID. U & Th Natural Series + K

Eff.= 1/[7.31e-002*En^-2.40e+000 + 7.89e+001*En^8.95e-001] 04-26-02 12:00

Gamma Fraction Limit >= . . . 71.00 % | Decay Limit <= 8.000 Halflives
Library Energy Tolerance. . . 1.20

FINAL ACTIVITY REPORT

Nuclide	Energy (keV)	Conc +/- 1.00sigma (uCi/g)	Halflife (hrs)	Peaks Found
Bi-214	Average:	2.19e-006 +/-6.84e-008	3.32e-001	4 of 10
	609.31	1.93e-006 +/-7.84e-008		
	727.17	8.41e-006 +/-3.58e-007		
	1120.30	1.77e-006 +/-2.18e-007		
	1764.50	2.29e-006 +/-2.12e-007		
U-234	53.20	I.D.Only	2.14e+009	1 of 1
Pb-212	Average:	1.41e-005 +/-1.04e-007	1.06e+001	5 of 6
	74.82	1.43e-005 +/-6.60e-007		
	77.11	1.26e-005 +/-4.23e-007		
	87.30	1.10e-005 +/-5.72e-007		
	238.63	1.43e-005 +/-1.12e-007		
	300.09	1.20e-005 +/-8.44e-007		
Pb-214	Average:	2.06e-006 +/-6.71e-008	4.47e-001	5 of 6
	74.82	2.11e-006 +/-1.14e-006		
	87.30	2.11e-006 +/-9.84e-007		
	241.98	2.11e-006 +/-2.45e-007		
	295.21	1.87e-006 +/-1.47e-007		
	351.92	2.11e-006 +/-7.98e-008		
Th-228	84.37	1.73e-005 +/-6.34e-006	1.68e+004	1 of 2
Ac-228	Average:	1.47e-005 +/-1.36e-007	6.13e+000	10 of 10
	89.95	2.98e-005 +/-1.84e-006		
	93.35	1.97e-005 +/-1.58e-006		
	209.28	1.17e-005 +/-7.17e-007		
	270.23	1.46e-005 +/-8.61e-007		
	327.64	1.11e-005 +/-9.30e-007		
	338.32	1.42e-005 +/-2.99e-007		

	463.00	1.21e-005	+ -6.75e-007			
	794.70	1.34e-005	+ -7.37e-007			
	911.07	1.50e-005	+ -2.12e-007			
	969.11	1.57e-005	+ -2.90e-007			
Ra-224	240.98	1.17e-005	+ -4.64e-007	8.69e+001	1 of	1
K-40	1460.80	9.31e-006	+ -4.55e-007	1.12e+013	1 of	1

TOTAL: 7.14e-005 uCi/g

UNKNOWN PEAKS

Energy (keV)	Centroid Channel	Net Counts	Un- Certainty	C.L. Counts	Bkg. Counts	FWHM (keV)	Net Gamma/sec
105.31	440.71	781	202	415	8288	1.50	5.801e+000
129.24	538.38	1666	198	399	8358	1.60	1.044e+001
277.25	1142.72	1152	161	338	3756	1.64	8.518e+000
409.44	1682.48	933	89	173	1438	1.68	9.357e+000
510.60	2095.54	2921	98	168	1296	2.28	3.538e+001
562.42	2307.13	363	69	138	961	2.03	4.782e+000
583.13	2391.74	9134	124	166	1225	1.97	1.242e+002
755.33	3094.90	322	60	120	664	1.20	5.503e+000
772.45	3164.83	255	59	117	718	2.12	4.445e+000
835.58	3422.62	272	53	104	543	0.98	5.085e+000
860.46	3524.22	1119	57	95	416	1.94	2.147e+001
964.68	3949.85	1263	50	73	226	2.26	2.683e+001
1587.78	6494.79	336	49	96	408	2.46	1.114e+001
1620.59	6628.81	210	31	57	139	2.20	7.091e+000
1630.55	6669.49	246	32	58	140	1.92	8.353e+000

Pesticide

Pesticide Results Summary
341 East Ohio Street
(Revised 10/16/02)

Sample Location ¹	Sample Date	Sample Type ²	Chlordane Immunoassay Field Kit ³ (mg/kg)	Laboratory Constituent Concentration Results ⁴ (mg/kg)							
				Aldrin	alpha BHC	Chlordane (tech)	Dieldrin	Heptachlor	Heptachlor Epoxide	Lindane (gamma BHC)	4,4'-DDT
F-4	07/26/2002	base	0.534	ND(0.038)	ND(0.038)	ND(0.38)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)
F-6	07/26/2002	base	0.437	ND(0.038)	ND(0.038)	ND(0.38)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)
F-10	07/26/2002	base	0.068	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.036)	ND(0.036)	ND(0.036)
F-8	07/31/2002	base	0.005	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.036)	ND(0.036)	ND(0.036)
H-6	07/31/2002	base	1.48	ND(0.039)	ND(0.039)	ND(0.39)	ND(0.039)	0.36	ND(0.039)	ND(0.039)	ND(0.039)
H-10	07/31/2002	base	0.157	ND(0.021)	ND(0.021) ^c	ND(0.42)	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)
H-12	07/31/2002	base	0.804	ND(0.039)	ND(0.039)	ND(0.39)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)
H-4	08/01/2002	base	0.004	ND(0.035)	ND(0.035)	ND(0.35)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)
H-8	08/01/2002	base	0.009	ND(0.035)	ND(0.035)	ND(0.35)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)
I-2	08/02/2002	sidewall	0.009	ND(0.020)	ND(0.020) ^c	ND(0.41)	ND(0.041)	ND(0.041)	ND(0.041)	ND(0.041)	ND(0.041)
I-4	08/02/2002	sidewall	0.246	ND(0.040)	ND(0.040)	ND(0.40)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)
I-6	08/02/2002	sidewall	0.246	ND(0.021)	ND(0.021) ^c	ND(0.42)	ND(0.042)	0.049	ND(0.042)	ND(0.042)	ND(0.042)
H-6(2) ^a	08/13/2002	base	0.041	0.049	ND(0.094)	13	0.051 J	1.4	ND(0.370)	ND(0.094)	0.029 J
H-14	08/14/2002	base	0.0	ND(0.0018)	ND(0.0018)	ND(0.018)	ND(0.0018)	ND(0.0018)	0.0007 J	ND(0.0018)	ND(0.0018)
F-16	08/20/2002	base	0.007	ND(0.002)	0.00059 J	ND(0.020)	ND(0.002)	ND(0.002)	ND(0.0078)	ND(0.002)	ND(0.002)
F-18	08/20/2002	base	0.084	0.001 J	ND(0.0021)	ND(0.021)	ND(0.0021)	ND(0.0021)	ND(0.0081)	ND(0.0021)	ND(0.0021)
F-21	08/20/2002	sidewall	0.874	ND(0.0021)	ND(0.0021)	ND(0.021)	ND(0.0021)	ND(0.0021)	0.0052 J	ND(0.0021)	ND(0.0021)
F-14	08/20/2002	sidewall	0.719	ND(0.002)	ND(0.002)	ND(0.020)	ND(0.002)	ND(0.002)	0.0046 J	ND(0.002)	ND(0.002)
I-16	08/20/2002	sidewall	0.486	ND(0.002)	ND(0.002)	0.068	0.005	0.0037	ND(0.0079)	ND(0.002)	ND(0.002)
I-18	08/20/2002	sidewall	0.008	ND(0.0018)	ND(0.0018)	ND(0.018)	ND(0.0018)	ND(0.0018)	ND(0.0018)	ND(0.0018)	ND(0.0018)
H-16	08/23/2002	base	0.001	ND(0.0019)	ND(0.0019)	ND(0.019)	ND(0.0019)	ND(0.0019)	ND(0.0019)	ND(0.0019)	ND(0.0019)
H-18	08/23/2002	base	0.036	ND(0.0097)	ND(0.0097)	ND(0.097)	ND(0.0097)	0.012	0.058 J	ND(0.0097)	ND(0.0097)
D0.5-16	08/23/2002	vertical	0.019	0.00082 J	0.00076 J	ND(0.022)	0.00081 J	0.0015 J	ND(0.0086)	ND(0.0022)	ND(0.0022)
D0.5-18	08/23/2002	vertical	0.05	ND(0.021)	ND(0.021)	ND(0.210)	ND(0.021)	0.031	ND(0.043) ^c	ND(0.021)	ND(0.021)
D0.5-20	08/23/2002	vertical	0.734	0.015 J	0.0062 J	ND(0.230)	ND(0.023)	0.019 J	0.055 J	ND(0.023)	0.0085 J
J0.5-8	08/23/2002	vertical	0.009	ND(0.022)	ND(0.022)	ND(0.220)	ND(0.022)	ND(0.022)	ND(0.022)	ND(0.022)	ND(0.022)
F-12	08/29/2002	base	0.006	0.00047 J	ND(0.002)	ND(0.020)	0.0011 J	0.0035	ND(0.0079)	ND(0.002)	0.00043 J
F-14	08/29/2002	base	0.022	ND(0.002)	ND(0.002)	ND(0.020)	ND(0.002)	ND(0.002)	ND(0.0077)	ND(0.002)	ND(0.002)
G-20	08/29/2002	base	0.012	ND(0.0018)	ND(0.0018)	ND(0.018)	ND(0.0018)	ND(0.0018)	ND(0.0072)	ND(0.0018)	ND(0.0018)
J-16.5	08/29/2002	base	0.002	ND(0.0018)	ND(0.0018)	ND(0.018)	ND(0.0018)	ND(0.0018)	ND(0.0073)	ND(0.0018)	ND(0.0018)
J-12	09/04/2002	base	0.002	ND(0.0018)	ND(0.0018)	ND(0.018)	ND(0.0018)	ND(0.0018)	ND(0.0072)	ND(0.0018)	ND(0.0018)
J-14	09/04/2002	base	0.002	ND(0.0019)	ND(0.0019)	ND(0.019)	ND(0.0019)	ND(0.0019)	ND(0.0074)	ND(0.0019)	ND(0.0019)
K-12	09/04/2002	vertical	0.001	ND(0.020)	ND(0.020)	ND(0.200)	ND(0.020)	ND(0.020)	ND(0.039) ^c	ND(0.020)	ND(0.020)
K-14	09/04/2002	vertical	0.013	ND(0.019)	ND(0.019)	ND(0.190)	ND(0.019)	ND(0.019)	ND(0.038) ^c	ND(0.019)	ND(0.019)
H-6(3) ^d	10/03/2002	base	ND-0.039 ^e	ND(0.0021)	ND(0.0021)	ND(0.021)	ND(0.0021)	0.0075	ND(0.0021)	ND(0.0021)	ND(0.0021)
Clean-up Objective ⁵ (mg/kg)				0.04	0.1	1.8	0.04	0.1	0.07	0.5	2

Notes: Shaded values indicate an exceedance of clean-up objective

1 - Sample location is the center point of the 10 X 10 meter grid for base of excavation samples.

The location designation for vertical samples indicates the actual sample location.

2 - Base - Composite sample from the base of the excavation (five grab samples from 100 m2 area).

Sidewall - Vertical composite of five grab samples from excavation side wall.

3 - The chlordane immunoassay kit does not differentiate between chlordane and other cyclodienes such as heptachlor, refer to method documentation for information on the relative sensitivities.

4 - Severn Trent Services (STL), Earth City, Missouri. (Lab qualifiers: ND - not detected, J - estimated value)

5 - Bold and italic sample results indicate an exceedance of the clean-up objective (35 IAC 742, Appendix B, Table A).

a - Resample following excavation of additional soil.

b - Depth below previous excavation.

c - Reporting limit for the constituent lowered to listed value after review of the chromatographic data by the laboratory.

d - Sample collected following the excavation of an additional 1 foot of soil (i.e., approximately 12 feet below original asphalt grade).

e - Three individual immunoassay tests were run on a series of geoprobe samples to determine depth of excavation necessary to remove contaminants.

Field Immunoassay



**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
06/24/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.79	1
	100		1.12	110
	600		0.89	560
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H½-9	surface	0.82	2754
	H½-9¾	surface	0.4	>3000
	H½-9¾ dup	surface	0.38	>3000
	H-10½	surface	0.38	>3000
	H-10½ rep	surface	0.42	>3000
	G-9½	surface	0.74	>3000
	Note: Sample calculation includes a 3-fold dilution			
06/25/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.57	1
	100		0.95	60
	600		0.53	869
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	G¾-4¾	surface	0.2	>3000
	H¼-6	surface	1.07	139
	G¼-8	surface	0.31	>3000
	G½-12½	surface	0.51	>3000
	G½-12	surface	0.43	>3000
	I¾-10	surface	1.32	28
	I¾-8½	surface	1.24	47
	I-11	surface	0.23	>3000
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
06/27/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.17	1
	100		0.8	51
	600		0.51	972
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	I½-11½	surface	0.32	>3000
	I½-11½, new extract	surface	0.52	>3000
	Notes:	Original extract not refrigerated, new sample more representative		
		Sample calculation includes a 5-fold dilution		
06/27/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.14	2
	100		0.83	38
	600		0.53	794
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H-14	surface	0.16	>3000
	F½-13½	surface	0.23	>3000
	I-13½	surface	0.75	495
	I-13½ dup	surface	0.77	396
	J-13	surface	0.23	>3000
	I-4½	surface	1.13	7
	Note: Sample calculation includes a 5-fold dilution			
06/28/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.92	1
	100		0.72	33
	600		0.49	1321
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F-16	surface	0.35	>3000
	H-16	surface	0.56	2156
	H-16 dup	surface	0.38	>3000
	K-14	surface	0.79	54
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
06/28/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.1	1
	100		0.8	34
	600		0.46	1308
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F-16	surface	0.71	446
	L-12	surface	0.29	>3000
	Note: Sample calculation includes a 5-fold dilution			
07/16/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.96	1
	100		0.7	29
	600		0.36	1470
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F-9.5 0-3'	Vertical delineation	0.24	>3000
	F-9.5 3-6'	Vertical delineation	0.34	>3000
	F-9.5 6-10'	Vertical delineation	0.3	>3000
	F-8 0-3'	Vertical delineation	0.26	>3000
	F-8 3-6'	Vertical delineation	0.26	>3000
	F-8 6-10'	Vertical delineation	0.43	>3000
	F-6 3-6'	Vertical delineation	0.24	>3000
	F-6 6-10'	Vertical delineation	0.15	>3000
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
07/18/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.26	1
	100		0.94	37
	600		0.6	1237
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F0.5-6.5	surface	0.93	202
	E0.5-6.5	surface	1.06	53
	F0.5-4.5	surface	0.09	>3000
	E0.5-4.5	surface	0.11	>3000
	F0.5-4.0	surface	0.92	225
	F0.5-3.0	surface	1.13	25
	Note: Sample calculation includes a 5-fold dilution			
07/23/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.6	1
	100		0.86	105
	600		0.59	579
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	G.5-I.5, 4-8	Stockpile	0.87	494
	G.5-I.5, 1-8	Stockpile	0.54	>3000
	E-15	Surface 0-2'	1.11	109
	E-18	Surface 0-2'	0.57	>3000
	F-17.5	Surface 0-2'	0.13	>3000
	E.5-12	Vertical Comp. 0-8'	1.44	14
	H-12.5	Vertical Comp. 3-8'	1.18	70
	I0.5-8.5	Vertical Comp. 0-6'	1.36	22
	I0.5-11.5	Vertical Comp. 0-7'	1.36	22
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
07/26/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		2.72	1
	600		1.45	589
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F8	Verification	1.51	2179
	H4	Verification	1.58	1533
	H8	Verification	1.64	1134
	F4	Verification	1.79	534
	F6	Verification	1.83	437
	F10	Verification	2.2	68
	H6	Verification	0.26	>3000
	H10	Verification	1.41	>3000
	D18	Surface	2.36	30
	E19	Surface	2.73	5
	G1/2-19	Surface	2.39	26
Note: Sample calculation includes a 5-fold dilution				
07/31/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.23	1
	100		0.82	71
	600		0.59	741
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F8	Verification	1.24	5
	H6	Verification	0.68	1482
	H8	Verification	0.46	>3000
	H10	Verification	0.9	158
	H12	Verification	0.74	804
	H14	Verification	0.17	>3000
Note: Sample calculation includes a 5-fold dilution				

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
08/01/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.02	1
	100		0.74	51
	600		0.52	973
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H-4	pre-verification	1.05	4
	H-6	pre-verification	0.99	9
	H-14	pre-verification	0.42	>3000
	Note: Sample calculation includes a 5-fold dilution			
08/02/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.91	1
	100		0.68	33
	600		0.41	1340
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	I-2	Vertical Comp. 0-8'	0.89	9
	I-4	Vertical Comp. 3-8'	0.65	246
	I-6	Vertical Comp. 0-6'	0.65	246
	Note: Sample calculation includes a 5-fold dilution			
08/13/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.96	1
	100		0.69	28
	600		0.45	772
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F15	5x5 grid	0.15	>3000
	F17	5x5 grid	0.22	>3000
	H6	base	0.78	41
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
08/14/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.76	1
	100		0.55	41
	600		0.35	1135
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H14	base	0.96	0
	I16	vert	0.66	34
	I18	vert	0.77	5
	G18	base 5 X 5 meter	0.87	1
	Note: Sample calculation includes a 5-fold dilution			
08/19/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.93	1
	100		0.7	49
	600		0.51	1015
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F16	base	0.45	>3000
	F18	base	0.56	2280
	E16	vert	0.5	>3000
	E18	vert	0.65	540
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
08/20/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.64	1
	100		0.47	37
	600		0.29	1232
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F16	base	0.64	7
	F18	base	0.51	84
	F21	vert	0.39	874
	F14	vert	0.4	719
	J16	delineation	0.59	18
	I16	vert	0.42	486
	I18	vert	0.63	8
Note: Sample calculation includes a 5-fold dilution				
08/23/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.83	2
	100		0.7	14
	600		0.37	2531
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H16	base	0.97	1
	H18	base	0.74	36
	D.5-16	vert	0.78	19
	D.5-18	vert	0.72	50
	D.5-20	vert	0.55	734
	J.5-8	vert	0.83	9
	S1	delineation	0.93	2
	S2	delineation	1	1
Note: Sample calculation includes a 5-fold dilution				

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
08/28/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.77	1
	100		0.62	26
	600		0.41	1550
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	J12	delineation - 4' bgs	0.58	288
	J14	delineation - 4' bgs	0.61	161
	Note: Sample calculation includes a 5-fold dilution			
08/28/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		2.05	1
	100		1.58	46
	600		1.17	1067
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	J11	vert	1.39	989
	J12	base	1.7	92
	J14	base	2.14	3
	J15	vert clay & fill	0.19	>3000
	K12	vert	1.51	394
	K14	vert	1.78	50
	Note: Sample calculation includes a 5-fold dilution			
08/29/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		0.96	1
	600		0.39	600
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	F12	vert	0.94	6
	F14	base	0.83	22
	G20	base	0.88	12
	J15	vert fill only	0.09	>3000
	Note: Sample calculation includes a 5-fold dilution			

**Immunoassay Estimated Chlordane Concentrations
341 East Ohio Street Project**

Date	Sample Batch Information			
09/04/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.09	1
	100		0.7	51
	600		0.39	982
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	J12	base	1.23	2
	J14	base	1.2	2
	J16.5	base	1.2	2
	K12	vert	1.25	1
	K14	vert	1.01	13
	Note: Sample calculation includes a 5-fold dilution			
09/23/2002	Standards (ppb)		Absorbance	Estimated Concentration (ug/L)
	0		1.14	1
	100		0.77	60
	600		0.52	868
	Samples	Description	Absorbance	Estimated Concentration (ug/kg)
	H-6A1*	vert 12-24"	1.4	0
	H-6A2	vert 24-36"	1.65	0
	H-6A3	vert 36-60"	1.51	0
	H-6B1	vert 12-24"	1.21	3
	H-6B2	vert 24-36"	1.27	1
	H-6B3	vert 36-60"	1.27	1
	H-6C1	vert 12-24"	0.96	39
	H-6C2	vert 24-36"	0.87	103
	H-6C3	vert 36-60"	1.12	7
	Notes:	Sample calculation includes a 5-fold dilution		
		* - Depth below former excavation base		

Severn Trent Laboratories

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SERVICES

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October 14, 2002

STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, IL 60061
Attn.: Steve Kornder

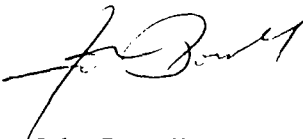
Subject: Revised Pesticide Results

Dear Mr. Kornder:

Enclosed are the revised pesticide results for several samples. The reporting limit was decreased for aldrin on samples H-10, I-2 and I-6 and for heptachlor epoxide on samples D0.5-18, K-12 and K-14. Each of the chromatograms was examined to determine that these compounds was not detected below the original reporting limit. It was determined that the reporting limit could be decreased in each of these cases.

STL looks forward to continuing our relationship with STS Consultants. If you have any questions or need additional information, please contact me at (314) 298-8566.

Sincerely,



John Powell
Project Manager

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-10

GC Semivolatiles

Lot-Sample #....: F2H010233-003 Work Order #....: E5QGH1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 09:15 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 03:06
Dilution Factor: 20
% Moisture.....: 19 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Heptachlor	ND	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	21	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-2

GC Semivolatiles

Lot-Sample #...: F2H050168-001 Work Order #...: E5XM31AA Matrix.....: SOLID
 Date Sampled...: 08/02/02 14:30 Date Received...: 08/03/02
 Prep Date.....: 08/08/02 Analysis Date...: 08/12/02
 Prep Batch #...: 2220226 Analysis Time...: 15:57
 Dilution Factor: 20
 % Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	41	ug/kg
Heptachlor epoxide	ND	41	ug/kg
Aldrin	ND	20	ug/kg
Chlordane (technical)	ND	410	ug/kg
alpha-BHC	ND	41	ug/kg
gamma-BHC (Lindane)	ND	41	ug/kg
4,4'-DDT	ND	41	ug/kg
Dieldrin	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
 Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-6

GC Semivolatiles

Lot-Sample #....: F2H050168-003 Work Order #....: E5XNA1AA Matrix.....: SOLID
 Date Sampled....: 08/02/02 14:40 Date Received...: 08/03/02
 Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
 Prep Batch #....: 2220226 Analysis Time...: 04:14
 Dilution Factor: 20
 % Moisture.....: 18 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	49	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	21	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
 Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-18

GC Semivolatiles

Lot-Sample #....: F2H280172-004 Work Order #....: E7A8T1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 14:27
Dilution Factor: 10
% Moisture.....: 20 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	21	ug/kg
alpha-BHC	ND	21	ug/kg
gamma-BHC (Lindane)	ND	21	ug/kg
Chlordane (technical)	ND	210	ug/kg
4,4'-DDT	ND	21	ug/kg
Dieldrin	ND	21	ug/kg
Heptachlor	31	21	ug/kg
Heptachlor epoxide	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-12

GC Semivolatiles

Lot-Sample #....: F2I050108-004 Work Order #....: E7PPX1AA Matrix.....: SOLID
 Date Sampled....: 09/04/02 08:15 Date Received...: 09/05/02
 Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
 Prep Batch #....: 2249219 Analysis Time...: 06:13
 Dilution Factor: 10
 % Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	20	ug/kg
alpha-BHC	ND	20	ug/kg
gamma-BHC (Lindane)	ND	20	ug/kg
Chlordane (technical)	ND	200	ug/kg
4,4'-DDT	ND	20	ug/kg
Dieldrin	ND	20	ug/kg
Heptachlor	ND	20	ug/kg
Heptachlor epoxide	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-14

GC Semivolatiles

Lot-Sample #....: F2I050108-005 Work Order #....: E7PP01AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:20 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 06:42
Dilution Factor: 10
% Moisture.....: 11 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	19	ug/kg
alpha-BHC	ND	19	ug/kg
gamma-BHC (Lindane)	ND	19	ug/kg
Chlordane (technical)	ND	190	ug/kg
4,4'-DDT	ND	19	ug/kg
Dieldrin	ND	19	ug/kg
Heptachlor	ND	19	ug/kg
Heptachlor epoxide	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

Inv #
16023631

SEVERN

TRENT

SERVICES

STL St. Louis

13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566

Fax 314 298 8757

www.stl-inc.com

ANALYTICAL REPORT

Waste Characterization

Lot #: F2J040269

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.



John D. Powell
Project Manager

October 11, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Case Narrative
LOT NUMBER: F2J040269

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on October 4, 2002. This sample is associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

There were no anomalies associated with this sample.

METHODS SUMMARY

F2J040269

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2J040269

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
E9FJW	001	H6-3		10/03/02	10:20

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, permeability pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H6-3

GC Semivolatiles

Lot-Sample #...: F2J040269-001 Work Order #...: E9FJW1AA Matrix.....: SOLID
Date Sampled...: 10/03/02 10:20 Date Received...: 10/04/02
Prep Date.....: 10/07/02 Analysis Date...: 10/10/02
Prep Batch #...: 2280295 Analysis Time...: 22:05
Dilution Factor: 1
% Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	7.5	2.1	ug/kg
Heptachlor epoxide	ND	8.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	121	(52 - 130)
Tetrachloro-m-xylene	96	(60 - 119)

NOTE (S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H6-3

General Chemistry

Lot-Sample #....: F2J040269-001 Work Order #....: E9FJW Matrix.....: SOLID
Date Sampled....: 10/03/02 10:20 Date Received...: 10/04/02
% Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	18.8	0.10	%	MCANW 160.3 MOD	10/08/02	2281523
		Dilution Factor: 1		Analysis Time...: 17:15		

LOT# F2J040269

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F2J040269
MB Lot-Sample #: D2J070000-295

Work Order #...: E9HQF1AA

Matrix.....: SOLID

Analysis Date...: 10/10/02

Prep Date.....: 10/07/02

Analysis Time...: 22:34

Dilution Factor: 1

Prep Batch #...: 2280295

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	0.52 J	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	96	(52 - 130)
Tetrachloro-m-xylene	99	(60 - 119)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2J040269 Work Order #....: E9HQF1AC Matrix.....: SOLID
LCS Lot-Sample#: D2J070000-295
Prep Date.....: 10/07/02 Analysis Date...: 10/10/02
Prep Batch #....: 2280295 Analysis Time...: 21:36
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	85	(65 - 109)	SW846 8081A
gamma-BHC (Lindane)	86	(64 - 110)	SW846 8081A
Endrin	96	(68 - 122)	SW846 8081A
4,4'-DDT	91	(63 - 127)	SW846 8081A
Dieldrin	90	(68 - 111)	SW846 8081A
Heptachlor	103	(67 - 118)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	96	(67 - 122)
Tetrachloro-m-xylene	95	(66 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Field point denotes control parameters

Chain of Custody Record

0.9°
10/4/12

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client STS		Project Manager Steve Korndor		Date 10/3/02	Chain of Custody Number 147551
Address 750 Corp Woods Parkway		Telephone Number (Area Code)/Fax Number 847-229-2448		Lab Number	Page 1 of 1

City Vernon Hills	State IL	Zip Code 60061	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)
Project Name and Location (State) 341 East Ohio ST			Carrier/Waybill Number		

Contract/Purchase Order/Quote No.			Matrix				Containers & Preservatives						Conditions of Receipt		
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Temp	Pesticides see list	
H6-3	10/3/02	10:20				X	X						X	X	Pesticides
Temp B/K	11			X			X								Aldrin
															alpha BHC
															chlordane, Tech
															Dieldrin
															heptachlor
															heptachlor, epoxide
															Lindane
															4,4' DDT

Possible Hazard Identification	Sample Disposal	(A fee may be assessed if samples are retained longer than 1 month)
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	

Turn Around Time Required	QC Requirements (Specify)
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input checked="" type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> Other _____	

1. Relinquished By 	Date 10/4/02	Time 8:00 AM	1. Received By 	Date 10/5/02	Time 0900
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

STL ST. LOUIS

LOT# F2J040269

Sample Receiving Checklist

Lot #: F2J040269 Date/Time Received: 10/5/02 0900Company Name & Sampling Site: STS*Cooler #(s): 1Temperatures (°C): 0.9PM to Complete This Section: Yes ☐ No ☐Residual chlorine check required: ☐

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking & Labeling Check Points:

N/A Yes No

- ☐ ☒ ☐ 1. Cooler seals intact. (N/A if hand delivered)
- ☒ ☐ 2. Chain of custody present.
- ☐ ☒ 3. Bottles broken and/or are leaking, comment if yes.
- ☐ ☒ 4. Multiphase samples present? If yes, comment below.

PHOTOGRAPH BROKEN BOTTLES/MULTIPHASE SAMPLES

- ☐ ☐ 5. Proper container & preservatives used (ref. Attachment D of SOP# DEN-QA-0003)
- ☐ ☐ 6. pH of all samples checked and meet requirements, note exceptions.
- ☐ ☐ 7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.
- ☐ ☐ 8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☐ ☐ 9. Chain of custody agrees with bottle count, comment if no.
- ☐ ☐ 10. Chain of custody agrees with labels, comment if no.
- ☐ ☐ 11. VOA samples filled completely, comment if no.
- ☐ ☐ 12. VOA vials preserved, check label. Preservative ☐ HCl ☐ 4±2°C ☐ Sodium Thiosulfate
- ☐ ☐ 13. Did samples require preservation with sodium thiosulfate?
- ☐ ☐ 14. If yes to #12, did the samples contain residual chlorine?
- ☐ ☐ 15. Sediment present in dissolved/filtered bottles.
- ☐ ☐ 16. Are analyses with short holding times requested?
- ☐ ☐ 17. Was a quick Turn Around (TAT) requested?
- ☐ ☐ 18. Is extra sample volume provided for MS, MSD or matrix duplicates?

DOUBLECHECK METALS, SAMPLE LABELS & SUBCONTRACT

- ☐ ☐ 19. Subcontract COC signed and sent with samples to bottle prep?
- ☐ ☐ 20. Were sample labels double-checked by a second person?
- ☐ ☐ 21. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☐ ☐ 22. If applicable, were AFCEE Metals placed in the walkin refrigerator?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).



STL St. Louis
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Earth City, MO 63045

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ANALYTICAL REPORT

Waste Characterization

Lot #: F2I240217

Rich Berggreen

**STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061**

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "J. D. Powell".

**John D. Powell
Project Manager**

September 27, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Case Narrative
LOT NUMBER: F2I240217

This report contains the analytical results for the nine samples received under chain of custody by STL St. Louis on September 24, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:
F2I240217 (7): H-6C1

Affected Methods:
8081A

Case Narrative:
Surrogate recovery for TCMX failed control limits 60-119% at 170%. The raw data show clear evidence of matrix interference. The recovery for the other surrogate, DCB, is within control limits. All other calibration and QC criteria were met.

METHODS SUMMARY

F2I240217

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2I240217

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E8Q12	001	H-6A1	09/23/02	11:20
E8Q17	002	H-6A2	09/23/02	11:30
E8Q2G	004	H-6B1	09/23/02	10:00
E8Q2N	005	H-6B2	09/23/02	10:05
E8Q23	007	H-6C1	09/23/02	10:35
E8Q27	008	H-6C2	09/23/02	10:40

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, pour filter test, pH, pourosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6A1

GC Semivolatiles

Lot-Sample #....: F2I240217-001 Work Order #....: E8Q121AA Matrix.....: SOLID
Date Sampled....: 09/23/02 11:20 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 10:01
Dilution Factor: 1
% Moisture.....: 16 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	8.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	89	(52 - 130)
Tetrachloro-m-xylene	82	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6A1

General Chemistry

Lot-Sample #....: F2I240217-001 Work Order #....: E8Q12 Matrix.....: SOLID
Date Sampled....: 09/23/02 11:20 Date Received...: 09/24/02
% Moisture.....: 16

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	16.2	0.10	%	MCANW 160.3 MOD	09/26/02	2269433
		Dilution Factor: 1		Analysis Time...: 14:00		

LOT# F2I240217

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6A2

GC Semivolatiles

Lot-Sample #....: F2I240217-002 Work Order #....: E8Q171AA Matrix.....: SOLID
Date Sampled....: 09/23/02 11:30 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 10:41
Dilution Factor: 1
% Moisture.....: 16 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	8.0	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Decachlorobiphenyl	83	(52 - 130)
Tetrachloro-m-xylene	76	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6A2

General Chemistry

Lot-Sample #....: F2I240217-002 Work Order #....: E8Q17 Matrix.....: SOLID
Date Sampled....: 09/23/02 11:30 Date Received...: 09/24/02
% Moisture.....: 16

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	16.1	0.10	%	MCAHW 160.3 MOD	09/26/02	2269433
Dilution Factor: 1				Analysis Time... 14:00		

LOT# F2I240217

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6B1

GC Semivolatiles

Lot-Sample #....: F2I240217-004 Work Order #....: E8Q2G1AA Matrix.....: SOLID
Date Sampled....: 09/23/02 10:00 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 10:55
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	83	(52 - 130)
Tetrachloro-m-xylene	76	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6B1

General Chemistry

Lot-Sample #....: F2I240217-004 Work Order #....: E8Q2G Matrix.....: SOLID
Date Sampled....: 09/23/02 10:00 Date Received...: 09/24/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.0	0.10	%	MCANW 160.3 MOD	09/26/02	2269433
		Dilution Factor: 1		Analysis Time...: 14:00		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6B2

GC Semivolatiles

Lot-Sample #....: F2I240217-005 Work Order #....: E8Q2N1AA Matrix.....: SOLID
Date Sampled....: 09/23/02 10:05 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 11:08
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	19	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	84	(52 - 130)
Tetrachloro-m-xylene	74	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6B2

General Chemistry

Lot-Sample #....: F2I240217-005 Work Order #....: E8Q2N Matrix.....: SOLID
Date Sampled....: 09/23/02 10:05 Date Received...: 09/24/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	12.8	0.10	%	MCANW 160.3 MOD	09/26/02	2269433
		Dilution Factor: 1		Analysis Time...: 14:00		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6C1

GC Semivolatiles

Lot-Sample #....: F2I240217-007 Work Order #....: E8Q231AA Matrix.....: SOLID
Date Sampled....: 09/23/02 10:35 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 11:21
Dilution Factor: 1
% Moisture.....: 12 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	19	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.6	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	83	(52 - 130)
Tetrachloro-m-xylene	170 *	(60 - 119)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6C1

General Chemistry

Lot-Sample #....: F2I240217-007 Work Order #....: E8Q23 Matrix.....: SOLID
Date Sampled....: 09/23/02 10:35 Date Received...: 09/24/02
% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.9	0.10	%	MCANW 160.3 MOD	09/26/02	2269433
Dilution Factor: 1				Analysis Time...: 14:00		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6C2

GC Semivolatiles

Lot-Sample #....: F2I240217-008 Work Order #....: E8Q271AA Matrix.....: SOLID
Date Sampled....: 09/23/02 10:40 Date Received...: 09/24/02
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 11:35
Dilution Factor: 1
% Moisture.....: 14 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.8	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	80	(52 - 130)
Tetrachloro-m-xylene	95	(60 - 119)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6C2

General Chemistry

Lot-Sample #....: F2I240217-008 Work Order #....: E8Q27 Matrix.....: SOLID
Date Sampled....: 09/23/02 10:40 Date Received...: 09/24/02
% Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.8	0.10	%	MCANW 160.3 MOD	09/26/02	2269433
Dilution Factor: 1				Analysis Time...: 14:00		

LOT# F2I240217

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2I240217
MB Lot-Sample #: D2I250000-406

Work Order #....: E8T611AA

Matrix.....: SOLID

Analysis Date...: 09/26/02
Dilution Factor: 1

Prep Date.....: 09/25/02

Analysis Time...: 11:48

Prep Batch #....: 2268406

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A
		PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS		
Decachlorobiphenyl	93	(52 - 130)		
Tetrachloro-m-xylene	86	(60 - 119)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2I240217 Work Order #....: B8T611AC Matrix.....: SOLID
LCS Lot-Sample#: D2I250000-406
Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
Prep Batch #....: 2268406 Analysis Time...: 09:48
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	91	(65 - 109)	SW846 8081A
gamma-BHC (Lindane)	92	(64 - 110)	SW846 8081A
Endrin	100	(68 - 122)	SW846 8081A
4,4'-DDT	105	(63 - 127)	SW846 8081A
Dieldrin	91	(68 - 111)	SW846 8081A
Heptachlor	95	(67 - 118)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	97	(67 - 122)
Tetrachloro-m-xylene	93	(66 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2I240217 Work Order #....: E8Q121AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2I240217-001 E8Q121AE-MSD
 Date Sampled....: 09/23/02 11:20 Date Received...: 09/24/02
 Prep Date.....: 09/25/02 Analysis Date...: 09/26/02
 Prep Batch #....: 2268406 Analysis Time...: 10:15
 Dilution Factor: 1 % Moisture.....: 16

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	81	(49 - 123)			SW846 8081A
	81	(49 - 123)	0.57	(0-30)	SW846 8081A
gamma-BHC (Lindane)	78	(47 - 126)			SW846 8081A
	81	(47 - 126)	2.7	(0-30)	SW846 8081A
Endrin	95	(56 - 128)			SW846 8081A
	96	(56 - 128)	0.86	(0-30)	SW846 8081A
4,4'-DDT	92	(47 - 136)			SW846 8081A
	94	(47 - 136)	1.4	(0-30)	SW846 8081A
Dieldrin	82	(51 - 123)			SW846 8081A
	83	(51 - 123)	0.76	(0-30)	SW846 8081A
Heptachlor	82	(51 - 125)			SW846 8081A
	85	(51 - 125)	3.4	(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	84	(52 - 130)
	84	(52 - 130)
Tetrachloro-m-xylene	84	(60 - 119)
	85	(60 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F2I240217

Work Order #....: E8Q2G-SMP
E8Q2G-DUP

Matrix.....: SOLID

Date Sampled....: 09/23/02 10:00 Date Received...: 09/24/02

% Moisture.....: 13

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Moisture	13.0	14.0	%	6.7	(0-20)	MCANW 160.3 MOD	09/26/02	2269433
Dilution Factor: 1					Analysis Time...: 14:00			

SD Lot-Sample #: F2I240217-004

Sample Receiving Checklist

Lot #: F21240217 Date/Time Received: 9/28/02 0900Company Name & Sampling Site: STS*Cooler #(s): 1Temperatures (°C): 2.4PM to Complete This Section: Yes ☐ No ☐Residual chlorine check required: ☐ ☐

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking & Labeling Check Points:

N/A Yes No

Initials

- ☒ ☐ 1. Cooler seals intact. (N/A if hand delivered)
- ☒ ☐ 2. Chain of custody present.
- ☐ ☒ 3. Bottles broken and/or are leaking, comment if yes. 1 lid, part of lid cracked but not broken, did not loosen cap.
- ☐ ☒ 4. Multiphase samples present? If yes, comment below.

PHOTOGRAPH BROKEN BOTTLES/MULTIPHASE SAMPLES

- ☒ ☐ 5. Proper container & preservatives used (ref. Attachment D of SOP# DEN-QA-0003)
- ☒ ☐ 6. pH of all samples checked and meet requirements, note exceptions.
- ☒ ☐ 7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.
- ☒ ☐ 8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☐ ☒ 9. Chain of custody agrees with bottle count, comment if no. NO COUNT ON COC
- ☒ ☐ 10. Chain of custody agrees with labels, comment if no.
- ☒ ☐ 11. VOA samples filled completely, comment if no.
- ☒ ☐ 12. VOA vials preserved, check label. Preservative ☐ HCl ☐ 4+2°C ☐ Sodium Thiosulfate
- ☐ ☒ 13. Did samples require preservation with sodium thiosulfate?
- ☒ ☐ 14. If yes to #12, did the samples contain residual chlorine?
- ☒ ☐ 15. Sediment present in dissolved/filtered bottles.
- ☐ ☒ 16. Are analyses with short holding times requested?
- ☒ ☐ 17. Was a quick Turn Around (TAT) requested? 48 hr
- ☒ ☐ 18. Is extra sample volume provided for MS, MSD or matrix duplicates?

DOUBLECHECK METALS, SAMPLE LABELS & SUBCONTRACT

- ☒ ☐ 19. Subcontract COC signed and sent with samples to bottle prep?
- ☒ ☐ 20. Were sample labels double-checked by a second person?
- ☒ ☐ 21. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☒ ☐ 22. If applicable, were AFCEE Metals placed in the walkin refrigerator?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

STL Denver
Condition Upon Receipt Anomaly Report (CUR)

Client: STL - St. LouisDate/Time: 9/25/02Lot No: F2I240217Initiated by: GP

Affected Samples

COC# _____

Client ID	Lab ID	Analyses Requested
<u>H-6A2</u>		

CONDITION/ANOMALY/VARIANCE (CHECK ALL THAT APPLY):

<input type="checkbox"/> COOLERS <input type="checkbox"/> Not Received, No Chain of Custody (COC) <input type="checkbox"/> Not Received but COC(s) Available <input type="checkbox"/> Leaking <input type="checkbox"/> Other: _____ <input type="checkbox"/> TEMPERATURE (greater than 6° C) <input type="checkbox"/> Cooler Temp _____ <input type="checkbox"/> Temperature Blank _____	<input type="checkbox"/> CUSTODY SEALS (COOLER(S)/CONTAINER(S)) <input type="checkbox"/> None <input type="checkbox"/> Not Intact <input type="checkbox"/> Other: _____ <input type="checkbox"/> CHAIN OF CUSTODY (COCs) <input type="checkbox"/> Not relinquished by Client; No date/time Relinq. <input type="checkbox"/> Incomplete Information <input type="checkbox"/> Other: _____
<input checked="" type="checkbox"/> CONTAINERS <input type="checkbox"/> Leaking <input checked="" type="checkbox"/> Broken <i>1 x lid cracked, did not break. Lid is still tightly attached.</i> <input type="checkbox"/> Extra <input type="checkbox"/> Without Labels <input type="checkbox"/> VOA Vials with Headspace _____ mm <input type="checkbox"/> Other: _____	<input type="checkbox"/> CONTAINER LABELS <input type="checkbox"/> Not the same ID/info as in COC <input type="checkbox"/> Incomplete <input type="checkbox"/> ID COLLECTION <input type="checkbox"/> Time <input type="checkbox"/> Date <input type="checkbox"/> PRESERVATIVE <input type="checkbox"/> Markings/Info smeared or illegible <input type="checkbox"/> Torn <input type="checkbox"/> Other: _____
<input type="checkbox"/> SAMPLES <input type="checkbox"/> Samples NOT RECEIVED but listed on COC _____ <input type="checkbox"/> Samples received but NOT LISTED on COC <input type="checkbox"/> Logged based on Label Information <input type="checkbox"/> Logged based on info from other samples on COC <input type="checkbox"/> Logged according to Work Plan <input type="checkbox"/> Logged on HOLD UNTIL FURTHER NOTICE <input type="checkbox"/> Other: _____	<input type="checkbox"/> Will be noted on COC <input type="checkbox"/> Client to send samples with new COC <input type="checkbox"/> Mislabeled as to tests, preservatives, etc. <input type="checkbox"/> Holding time expired <input type="checkbox"/> Improper container used <input type="checkbox"/> Not preserved / Improper preservative used <input type="checkbox"/> Improper pH _____ <input type="checkbox"/> Lab to preserve sample <input type="checkbox"/> Insufficient quantities for analysis

Comments: _____

Corrective Action:

- ☐ Client Informed: verbally on: _____ By: _____ : In writing on: _____ By: _____
☐ Sample(s) processed "as is". _____
☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor Review: GPDate: 9/25/02

Project Management Review: _____

Date: _____

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

Inv 16023195



STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.st-inc.com

ANALYTICAL REPORT

Waste Characterization

Lot #: F2I050108

Rich Berggreen

**STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061**

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "J. Powell".

**John D. Powell
Project Manager**

September 12, 2002

Case Narrative
LOT NUMBER: F2I050108

This report contains the analytical results for the six samples received under chain of custody by STL St. Louis on September 5, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2I050108 (1): J-12

F2I050108 (4): K-12

F2I050108 (2): J-14

F2I050108 (5): K-14

F2I050108 (3): J-16 1/2

F2I050108 (6): J-15

Affected Methods:

8081A

Case Narrative:

The overall mean %D is within control limits. Therefore, the CCV is in control. Method 8000B requires notification of individual compounds exceeding %D limits, and they include: 1st CCAL: all ok; 2nd CCAL: (rear column) Heptachlor 16%; 3rd CCAL: (front) Heptachlor 21%, (rear) Heptachlor 16%, Endosulfan sulfate 18%; 4th CCAL: (front) Heptachlor 16%, Endosulfan sulfate 18%, Endrin ketone 18%, (rear) Heptachlor 24%; Endosulfan II 18%; Isodrin -19%.

Associated samples include hits for some of the listed compounds. Sample F2I050108-006 has a hit for heptachlor that has a concentration that is less than the RL but greater than the MDL and is flagged with a J to indicate an estimated concentration. All other samples are ND.

Affected Samples:

F2I050108 (4): K-12

F2I050108 (5): K-14

F2I050108 (6): J-15

Affected Methods:

8081A

Case Narrative:

The RL for samples F2I050108-4 and 5 is elevated due to the presence of interfering, non-target, compounds. The associated sample extracts were dark yellow to brown in color.

METHODS SUMMARY

F2I050108

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2I050108

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
E7PPT	001	J-12		09/04/02	08:25
E7PPV	002	J-14		09/04/02	08:12
E7PPW	003	J-16 1/2		08/29/02	14:00
E7PPX	004	K-12		09/04/02	08:15
E7PP0	005	K-14		09/04/02	08:20
E7PP1	006	J-15		08/29/02	09:00

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-12

GC Semivolatiles

Lot-Sample #....: F2I050108-001 Work Order #....: E7PPT1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:25 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 03:18
Dilution Factor: 1
% Moisture.....: 7.3 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	127	(50 - 151)
Tetrachloro-m-xylene	75	(64 - 131)

NOTE (S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-12

General Chemistry

Lot-Sample #....: F2I050108-001 Work Order #....: E7PPT Matrix.....: SOLID
Date Sampled....: 09/04/02 08:25 Date Received...: 09/05/02
% Moisture.....: 7.3

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	7.3	0.10	%	MCANW 160.3 MOD	09/09/02	2252472
		Dilution Factor: 1		Analysis Time...: 17:20		

LOT # F2I050108

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-14

GC Semivolatiles

Lot-Sample #....: F2I050108-002 Work Order #....: E7PPV1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:12 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 03:47
Dilution Factor: 1
% Moisture.....: 9.6 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	19	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.4	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	107	(50 - 151)
Tetrachloro-m-xylene	87	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-14

General Chemistry

Lot-Sample #....: F2I050108-002 Work Order #....: E7PPV Matrix.....: SOLID
Date Sampled....: 09/04/02 08:12 Date Received...: 09/05/02
% Moisture.....: 9.6

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	9.6	0.10	%	MCANW 160.3 MOD	09/09/02	2252472

Dilution Factor: 1 Analysis Time...: 17:20

LOT # F2I050108

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-16 1/2

GC Semivolatiles

Lot-Sample #....: F2I050108-003 Work Order #....: E7PPW1AA Matrix.....: SOLID
Date Sampled....: 08/29/02 14:00 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 04:16
Dilution Factor: 1
% Moisture.....: 8.0 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	78	(50 - 151)
Tetrachloro-m-xylene	76	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-16 1/2

General Chemistry

Lot-Sample #....: F2I050108-003 Work Order #....: E7PPW Matrix.....: SOLID
Date Sampled....: 08/29/02 14:00 Date Received...: 09/05/02
% Moisture.....: 8.0

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	8.0	0.10	%	MCANW 160.3 MOD	09/09/02	2252472

Dilution Factor: 1 Analysis Time...: 17:20

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-12

GC Semivolatiles

Lot-Sample #....: F2I050108-004 Work Order #....: E7PPX1AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:15 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 06:13
Dilution Factor: 10
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	20	ug/kg
alpha-BHC	ND	20	ug/kg
gamma-BHC (Lindane)	ND	20	ug/kg
Chlordane (technical)	ND	200	ug/kg
4,4'-DDT	ND	20	ug/kg
Dieldrin	ND	20	ug/kg
Heptachlor	ND	20	ug/kg
Heptachlor epoxide	ND	77	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

← revised RL
to 39 µg/kg
(see rpt 10/14/02)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-12

General Chemistry

Lot-Sample #....: F2I050108-004 Work Order #....: E7PPX Matrix.....: SOLID
Date Sampled....: 09/04/02 08:15 Date Received...: 09/05/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.2	0.10	%	MCANW 160.3 MOD	09/09/02	2252472
Dilution Factor: 1				Analysis Time...: 17:20		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: K-14

GC Semivolatiles

Lot-Sample #....: F2I050108-005 Work Order #....: E7PP01AA Matrix.....: SOLID
Date Sampled....: 09/04/02 08:20 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 06:42
Dilution Factor: 10
% Moisture.....: 11 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	19	ug/kg
alpha-BHC	ND	19	ug/kg
gamma-BHC (Lindane)	ND	19	ug/kg
Chlordane (technical)	ND	190	ug/kg
4,4'-DDT	ND	19	ug/kg
Dieldrin	ND	19	ug/kg
Heptachlor	ND	19	ug/kg
Heptachlor epoxide	ND	75	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

- revised rpt. limit
to 38ug/kg
(see rpt 10/14/02)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: K-14

General Chemistry

Lot-Sample #....: F2I050108-005 Work Order #....: E7PP0 Matrix.....: SOLID
Date Sampled....: 09/04/02 08:20 Date Received...: 09/05/02
% Moisture.....: 11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.1	0.10	%	MCAW 160.3 MOD	09/09/02	2252472
Dilution Factor: 1				Analysis Time...: 17:20		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-15

GC Semivolatiles

Lot-Sample #....: F2I050108-006 Work Order #....: E7PP11AA Matrix.....: SOLID
Date Sampled....: 08/29/02 09:00 Date Received...: 09/05/02
Prep Date.....: 09/06/02 Analysis Date...: 09/10/02
Prep Batch #....: 2249219 Analysis Time...: 07:11
Dilution Factor: 500
% Moisture.....: 10 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	470 J,COL	950	ug/kg
alpha-BHC	ND	950	ug/kg
gamma-BHC (Lindane)	170 J,COL	950	ug/kg
Chlordane (technical)	46000	9500	ug/kg
4,4'-DDT	ND	950	ug/kg
Dieldrin	ND	950	ug/kg
Heptachlor	350 J,COL	950	ug/kg
Heptachlor epoxide	ND	3700	ug/kg
		PERCENT	RECOVERY
SURROGATE	RECOVERY	LIMITS	
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)	
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)	

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-15

General Chemistry

Lot-Sample #....: F2I050108-006 Work Order #....: E7PP1 Matrix.....: SOLID
Date Sampled....: 08/29/02 09:00 Date Received...: 09/05/02
% Moisture.....: 10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	10.1	0.10	%	MCANW 160.3 MOD	09/09/02	2252472
Dilution Factor: 1				Analysis Time...: 17:20		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2I050108
MB Lot-Sample #: D2I060000-219

Work Order #....: E7R1K1AA

Matrix.....: SOLID

Analysis Date...: 09/10/02
Dilution Factor: 1

Prep Date.....: 09/06/02

Analysis Time...: 07:40

Prep Batch #....: 2249219

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	99	(50 - 151)
Tetrachloro-m-xylene	85	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2I050108 Work Order #....: E7R1K1AC Matrix.....: SOLID
LCS Lot-Sample#: D2I060000-219
Prep Date.....: 09/06/02 Analysis Date...: 09/09/02
Prep Batch #....: 2249219 Analysis Time...: 17:33
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	89	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	88	(69 - 131)	SW846 8081A
Endrin	90	(70 - 137)	SW846 8081A
4,4'-DDT	95	(65 - 150)	SW846 8081A
Dieldrin	88	(73 - 133)	SW846 8081A
Heptachlor	104	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	89	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Not print density control parameters

Sample Receiving Checklist

Lot #: F2I050108 Date/Time Received: 9/5/02 0900Company Name & Sampling Site: STL- St. Louis*Cooler #(s): 1Temperatures (°C): 1.9PM to Complete This Section: Yes ☐ No ☐Residual chlorine check required: ☐

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking & Labeling Check Points:

N/A Yes No

- ☐ ☒ 1. Cooler seals intact. (N/A if hand delivered)
- ☒ ☐ 2. Chain of custody present.
- ☐ ☒ 3. Bottles broken and/or are leaking, comment if yes.
- ☐ ☒ 4. Multiphase samples present? If yes, comment below.

PHOTOGRAPH BROKEN BOTTLES/MULTIPHASE SAMPLES

- ☐ ☐ 5. Proper container & preservatives used (ref. Attachment D of SOP# DEN-QA-0003)
- ☐ ☐ 6. pH of all samples checked and meet requirements, note exceptions.
- ☐ ☐ 7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.
- ☐ ☐ 8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☐ ☐ 9. Chain of custody agrees with bottle count, comment if no.
- ☐ ☐ 10. Chain of custody agrees with labels, comment if no.
- ☐ ☐ 11. VOA samples filled completely, comment if no.
- ☐ ☐ 12. VOA vials preserved, check label. Preservative ☐ HCl ☐ 4±2°C ☐ Sodium Thiosulfate
- ☐ ☐ 13. Did samples require preservation with sodium thiosulfate?
- ☐ ☐ 14. If yes to #12, did the samples contain residual chlorine?
- ☐ ☐ 15. Sediment present in dissolved/filtered bottles.
- ☐ ☐ 16. Are analyses with short holding times requested?
- ☐ ☐ 17. Was a quick Turn Around (TAT) requested?
- ☐ ☐ 18. Is extra sample volume provided for MS, MSD or matrix duplicates?

DOUBLECHECK METALS, SAMPLE LABELS & SUBCONTRACT

- ☐ ☐ 19. Subcontract COC signed and sent with samples to bottle prep?
- ☐ ☐ 20. Were sample labels double-checked by a second person?
- ☐ ☐ 21. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☐ ☐ 22. If applicable, were AFCEE Metals placed in the walk-in refrigerator?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

FW

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ANALYTICAL REPORT

Waste Characterization

Lot #: F2H300266

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.



John D. Powell
Project Manager

September 6, 2002

Case Narrative
LOT NUMBER: F2H300266

This report contains the analytical results for the four samples received under chain of custody by STL St. Louis on August 30, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:
F2H300266 (3): J-15

Affected Methods:
8081A

Case Narrative:
The reporting limit is elevated due to the presence of high levels of compounds of interest.

Affected Samples:
F2H300266 (1): F-12

Affected Methods:
8081A

Case Narrative:
MSD recovery for Heptachlor failed control limits 63-146% at 203% and had a RPD of 59% (limit=0-30%). The raw data show clear evidence of matrix interference. Nonhomogenous sample matrix is suspected. All other calibration and QC criteria were met.

METHODS SUMMARY

F2H300266

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H300266

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
E7JFE	001	F-12		08/29/02	08:45
E7JFL	002	F-14		08/29/02	09:50
E7JFP	003	J-15		08/29/02	09:00
E7JPQ	004	G-20		08/29/02	09:50

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, pour filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-12

GC Semivolatiles

Lot-Sample #....: F2H300266-001 Work Order #....: E7JFE1AA Matrix.....: SOLID
Date Sampled....: 08/29/02 08:45 Date Received...: 08/30/02
Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
Prep Batch #....: 2246517 Analysis Time...: 10:11
Dilution Factor: 1
% Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	0.47 J, COL	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	0.43 J, COL	2.0	ug/kg
Dieldrin	1.1 J, COL	2.0	ug/kg
Heptachlor	3.5 COL	2.0	ug/kg
Heptachlor epoxide	ND	7.9	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	81	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-12

General Chemistry

Lot-Sample #....: F2H300266-001 Work Order #....: E7JFE Matrix.....: SOLID
Date Sampled....: 08/29/02 08:45 Date Received...: 08/30/02
% Moisture.....: 15

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	14.8	0.10	%	MCANW 160.3 MOD	09/03/02	2247203
		Dilution Factor: 1		Analysis Time...: 18:45		

LOT # F2H300266

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: P-14

GC Semivolatiles

Lot-Sample #....: F2H300266-002 Work Order #....: E7JFL1AA Matrix.....: SOLID
Date Sampled....: 08/29/02 09:50 Date Received...: 08/30/02
Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
Prep Batch #....: 2246517 Analysis Time...: 10:51
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	74	(50 - 151)
Tetrachloro-m-xylene	77	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: F-14

General Chemistry

Lot-Sample #....: F2H300266-002 Work Order #....: E7JFL Matrix.....: SOLID
Date Sampled....: 08/29/02 09:50 Date Received...: 08/30/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.3	0.10	%	MCANW 160.3 MOD	09/03/02	2247203
Dilution Factor: 1				Analysis Time...: 18:45		

LOT # F2H300266

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-15

GC Semivolatiles

Lot-Sample #....: F2H300266-003 Work Order #....: E7JFP1AA Matrix.....: SOLID
 Date Sampled....: 08/29/02 09:00 Date Received...: 08/30/02
 Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
 Prep Batch #....: 2246517 Analysis Time...: 11:04
 Dilution Factor: 1000
 % Moisture.....: 7.3 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	440 J, COL	1800	ug/kg
alpha-BHC	ND	1800	ug/kg
gamma-BHC (Lindane)	ND	1800	ug/kg
Chlordane (technical)	150000	18000	ug/kg
4,4'-DDT	ND	1800	ug/kg
Dieldrin	640 J, COL	1800	ug/kg
Heptachlor	2600	1800	ug/kg
Heptachlor epoxide	ND	7200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J-15

General Chemistry

Lot-Sample #....: F2H300266-003 Work Order #....: E7JFP Matrix.....: SOLID
Date Sampled....: 08/29/02 09:00 Date Received...: 08/30/02
% Moisture.....: 7.3

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	7.3	0.10	%	MCANW 160.3 MOD	09/03/02	2247203

Dilution Factor: 1 Analysis Time...: 18:45

LOT # F2H300266

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: G-20

GC Semivolatiles

Lot-Sample #....: F2H300266-004 Work Order #....: E7JFQ1AA Matrix.....: SOLID
Date Sampled....: 08/29/02 09:50 Date Received...: 08/30/02
Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
Prep Batch #....: 2246517 Analysis Time...: 11:18
Dilution Factor: 1
% Moisture.....: 7.3 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	76	(50 - 151)
Tetrachloro-m-xylene	81	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: G-20

General Chemistry

Lot-Sample #....: F2H300266-004 Work Order #....: E7JFQ Matrix.....: SOLID
Date Sampled....: 08/29/02 09:50 Date Received...: 08/30/02
% Moisture.....: 7.3

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	7.3	0.10	%	MCANW 160.3 MOD	09/03/02	2247203
		Dilution Factor: 1		Analysis Time...: 18:45		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H300266
MB Lot-Sample #: D2I030000-517

Work Order #....: E7L8F1AA

Matrix.....: SOLID

Analysis Date...: 09/05/02
Dilution Factor: 1

Prep Date.....: 09/03/02

Analysis Time...: 11:31

Prep Batch #....: 2246517

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	86	(50 - 151)
Tetrachloro-m-xylene	84	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H300266 Work Order #....: E7L8F1AC Matrix.....: SOLID
LCS Lot-Sample#: D2I030000-S17
Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
Prep Batch #....: 2246517 Analysis Time...: 09:58
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	98	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	96	(69 - 131)	SW846 8081A
Endrin	110	(70 - 137)	SW846 8081A
4,4'-DDT	111	(65 - 150)	SW846 8081A
Dieldrin	92	(73 - 133)	SW846 8081A
Heptachlor	101	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	103	(50 - 151)
Tetrachloro-m-xylene	97	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H300266 Work Order #....: E7JFE1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H300266-001 E7JFE1AE-MSD
 Date Sampled....: 08/29/02 08:45 Date Received...: 08/30/02
 Prep Date.....: 09/03/02 Analysis Date...: 09/05/02
 Prep Batch #....: 2246517 Analysis Time...: 10:24
 Dilution Factor: 1 % Moisture.....: 15

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	118	(72 - 129)			SW846 8081A
	110	(72 - 129)	6.4	(0-30)	SW846 8081A
gamma-BHC (Lindane)	90	(69 - 131)			SW846 8081A
	99	(69 - 131)	9.4	(0-30)	SW846 8081A
Endrin	124	(70 - 137)			SW846 8081A
	108	(70 - 137)	13	(0-30)	SW846 8081A
4,4'-DDT	102	(65 - 150)			SW846 8081A
	113	(65 - 150)	10	(0-30)	SW846 8081A
Dieldrin	92	(73 - 133)			SW846 8081A
	113	(73 - 133)	19	(0-30)	SW846 8081A
Heptachlor	102	(63 - 146)			SW846 8081A
	203 a,p	(63 - 146)	59	(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	78	(50 - 151)
	94	(50 - 151)
Tetrachloro-m-xylene	90	(64 - 131)
	97	(64 - 131)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Sample Receiving Checklist

Lot #: F2H/300266 Date/Time Received: 8/30/02 0845

Company Name & Sampling Site: STL St. Louis

*Cooler #(s): 1
Temperatures (°C): 0.9

PM to Complete This Section: Yes No
Residual chlorine check required: ☐ ☐
Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking & Labeling Check Points:

- N/A Yes No
- ☐ ☒ ☐ 1. Cooler seals intact. (N/A if hand delivered)
 - ☒ ☐ 2. Chain of custody present.
 - ☐ ☒ 3. Bottles broken and/or are leaking, comment if yes.
 - ☐ ☒ 4. Multiphase samples present? If yes, comment below.

PHOTOGRAPH BROKEN BOTTLES/MULTIPHASE SAMPLES

- ☐ ☐ 5. Proper container & preservatives used (ref. Attachment D of SOP# DEN-QA-0003)
- ☐ ☐ 6. pH of all samples checked and meet requirements, note exceptions.
- ☐ ☐ 7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.
- ☐ ☐ 8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☐ ☐ 9. Chain of custody agrees with bottle count, comment if no.
- ☐ ☐ 10. Chain of custody agrees with labels, comment if no.
- ☐ ☐ 11. VOA samples filled completely, comment if no.
- ☐ ☐ 12. VOA vials preserved, check label. Preservative ☐ HCl ☐ 4±2°C ☐ Sodium Thiosulfate
- ☐ ☐ 13. Did samples require preservation with sodium thiosulfate?
- ☐ ☐ 14. If yes to #12, did the samples contain residual chlorine?
- ☐ ☐ 15. Sediment present in dissolved/filtered bottles.
- ☐ ☐ 16. Are analyses with short holding times requested?
- ☐ ☐ 17. Was a quick Turn Around (TAT) requested?
- ☐ ☐ 18. Is extra sample volume provided for MS, MSD or matrix duplicates?

DOUBLECHECK METALS, SAMPLE LABELS & SUBCONTRACT

- ☐ ☐ ☐ 19. Subcontract COC signed and sent with samples to bottle prep?
- ☐ ☐ 20. Were sample labels double-checked by a second person?
- ☐ ☐ 21. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☐ ☐ 22. If applicable, were AFCEE Metals placed in the walkin refrigerator?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

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ANALYTICAL REPORT

REVISED

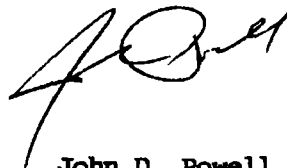
Waste Characterization

Lot #: F2H210313

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.



John D. Powell
Project Manager

September 3, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Revised Case Narrative
LOT NUMBER: F2H210313

This report contains the analytical results for the seven samples received under chain of custody by STL St. Louis on August 21, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

This report has been revised to report only the pesticides of interest.

Affected Samples:

F2H210313 (2): I-16

F2H210313 (3): I-18

F2H210313 (4): F-21

F2H210313 (5): F-14

Affected Methods:

8081A

Case Narrative:

The reporting limit for these samples is elevated due to the presence of interfering, non-target, compounds. The associated sample extracts were yellow to brown in color. Matrix interferences (large peaks) are observed in the sample chromatograms.

METHODS SUMMARY

F2H210313

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H210313

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E60KE	002	I-16	08/20/02	10:45
E60KF	003	I-18	08/20/02	11:00
E60KG	004	F-21	08/20/02	13:40
E60KH	005	F-14	08/20/02	13:20
E60KJ	006	F-16	08/20/02	13:00
E60KK	007	F-18	08/20/02	13:10

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, permeability pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-16

GC Semivolatiles

Lot-Sample #....: F2H210313-002 Work Order #....: E60KE1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 10:45 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 19:13
Dilution Factor: 5
% Moisture.....: 16 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	68 COL	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	5.0	2.0	ug/kg
Heptachlor	3.7	2.0	ug/kg
Heptachlor epoxide	ND	7.9	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-16

General Chemistry

Lot-Sample #....: F2H210313-002 Work Order #....: E60KE Matrix.....: SOLID
Date Sampled....: 08/20/02 10:45 Date Received...: 08/21/02
% Moisture.....: 16

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	15.6	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-18

GC Semivolatiles

Lot-Sample #....: F2H210313-003 Work Order #....: E60KF1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 11:00 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 19:42
Dilution Factor: 5
% Moisture.....: 7.7 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	ND	7.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-18

General Chemistry

Lot-Sample #....: F2H210313-003 Work Order #....: E60KF Matrix.....: SOLID
Date Sampled....: 08/20/02 11:00 Date Received...: 08/21/02
% Moisture.....: 7.7

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	7.7	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-21

GC Semivolatiles

Lot-Sample #....: F2H210313-004 Work Order #....: E60KG1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:40 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 20:11
Dilution Factor: 5
% Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	ND	2.1	ug/kg
Heptachlor epoxide	5.2 J, COL	8.3	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-21

General Chemistry

Lot-Sample #....: F2H210313-004 Work Order #....: E60KG Matrix.....: SOLID
Date Sampled....: 08/20/02 13:40 Date Received...: 08/21/02
% Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	19.3	0.10	%	MCAMW 160.3 MOD	08/27/02	2239419

Dilution Factor: 1 Analysis Time...: 15:15

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

GC Semivolatiles

Lot-Sample #....: F2H210313-005 Work Order #....: E60KH1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:20 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 20:40
Dilution Factor: 5
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	4.6 J	8.1	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

General Chemistry

Lot-Sample #....: F2H210313-005 Work Order #....: E60KH Matrix.....: SOLID
Date Sampled....: 08/20/02 13:20 Date Received...: 08/21/02
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17.0	0.10	%	MCANW 160.3 MOD	08/27/02	2239419

Dilution Factor: 1 Analysis Time...: 15:15

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-16

GC Semivolatiles

Lot-Sample #....: F2H210313-006 Work Order #....: E60KJ1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:00 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 21:09
Dilution Factor: 1
% Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	0.59 J, COL	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.8	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	70	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-16

General Chemistry

Lot-Sample #....: F2H210313-006 Work Order #....: B60KJ Matrix.....: SOLID
Date Sampled....: 08/20/02 13:00 Date Received...: 08/21/02
% Moisture.....: 15

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	14.6	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-18

GC Semivolatiles

Lot-Sample #....: F2H210313-007 Work Order #....: E60KK1AA Matrix.....: SOLID
Date Sampled....: 08/20/02 13:10 Date Received...: 08/21/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 21:39
Dilution Factor: 1
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	1.0 J	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Heptachlor	ND	2.1	ug/kg
Heptachlor epoxide	ND	8.1	ug/kg
PERCENT		RECOVERY	
SURROGATE	RECOVERY	LIMITS	
Decachlorobiphenyl	77	(50 - 151)	
Tetrachloro-m-xylene	97	(64 - 131)	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: F-18

General Chemistry

Lot-Sample #....: F2H210313-007 Work Order #....: E60KK Matrix.....: SOLID
Date Sampled....: 08/20/02 13:10 Date Received...: 08/21/02
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17.5	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F2H210313
MB Lot-Sample #: D2H220000-216

Work Order #...: E61LW1AA

Matrix.....: SOLID

Analysis Date...: 08/26/02

Prep Date.....: 08/22/02

Analysis Time...: 17:16

Dilution Factor: 1

Prep Batch #...: 2234216

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	99	(50 - 151)
Tetrachloro-m-xylene	100	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H210313 Work Order #....: E61LWLAC Matrix.....: SOLID
LCS Lot-Sample#: D2H220000-216
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 14:49
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	93	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	92	(69 - 131)	SW846 8081A
Endrin	96	(70 - 137)	SW846 8081A
4,4'-DDT	87	(65 - 150)	SW846 8081A
Dieldrin	92	(73 - 133)	SW846 8081A
Heptachlor	98	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	94	(50 - 151)
Tetrachloro-m-xylene	102	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Field point denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H210313 Work Order #....: E6VCA1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H200218-001 E6VCA1AE-MSD
 Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
 Prep Batch #....: 2234216 Analysis Time...: 17:45
 Dilution Factor: 50 % Moisture.....: 9.6

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	NC,DIL	(72 - 129)			SW846 8081A
	NC,DIL	(72 - 129)		(0-30)	SW846 8081A
gamma-BHC (Lindane)	NC,DIL	(69 - 131)			SW846 8081A
	NC,DIL	(69 - 131)		(0-30)	SW846 8081A
Endrin	NC,DIL	(70 - 137)			SW846 8081A
	NC,DIL	(70 - 137)		(0-30)	SW846 8081A
4,4'-DDT	NC,DIL	(65 - 150)			SW846 8081A
	NC,DIL	(65 - 150)		(0-30)	SW846 8081A
Dieldrin	NC,DIL	(73 - 133)			SW846 8081A
	NC,DIL	(73 - 133)		(0-30)	SW846 8081A
Heptachlor	NC,DIL	(63 - 146)			SW846 8081A
	NC,DIL	(63 - 146)		(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0	(50 - 151)
	Qualifiers: DIL,NC	
	0.0	(50 - 151)
	Qualifiers: DIL,NC	
Tetrachloro-m-xylene	0.0	(64 - 131)
	Qualifiers: DIL,NC	
	0.0	(64 - 131)
	Qualifiers: DIL,NC	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

STL ST. LOUIS

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SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. Louis

Run Date: 8/21/02
Time: 16:00:36
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-001
PROJECT #: WORK ORDER: E60KD
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.C. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02X
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: S7 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 10:27
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: J-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Archive	06	8/21/02	0/00/00 11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION			
(A-88-ZZ-01) E60KD-1-AA Protocol: Z QC Program: STANDARD TEST SET			

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:36
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-002
PROJECT #: WORK ORDER: E60KE
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 10:45
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: I-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E60KE-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E60KE-1-AC Protocol: A QC Program: STANDARD TEST SET				

STL ST. LOUIS

PSL20300

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SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/21/02

Time: 16:00:37

User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-003
PROJECT #:
REPORT TO: Rich Berggreen WORK ORDER: E60KF
P.O. NUMBER: RECEIVING DATE: 8/21/02
SITE: Waste Characterization SAMPLING DATE: 8/20/02
AMOUNT REC'D: 120G ANALYTICAL DUE DATE: 8/28/02N
STORAGE LOC: STL DENVER REPORT DUE DATE: 8/28/02
LOT COMMENTS: PRIORITY: 07
MATRIX: SOLID SAMPLING TIME: 11:00
USAP MATRIX: RECEIVING TIME: 9:45
SAMPLE ID: 1-15
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E60KF-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)				
04 8/21/02 0/00/00 11/27/02				
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-68-WM-01) E60KF-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-004
PROJECT #: WORK ORDER: E60KG
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:40
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-21
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
'A-13-QJ-01) E60KG-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E60KG-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/21/02

Time: 16:00:37

User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-005
PROJECT #: WORK ORDER: B60KH
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: C7
LOT COMMENTS: SAMPLING TIME: 13:20
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-14
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) B60KH-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) B60KH-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-006
PROJECT #: WORK ORDER: E60KJ
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:00
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
***** ANALYSIS *****				
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E60KJ-1-AA Protocol: A				
QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E60KJ-1-AC Protocol: A				
QC Program: STANDARD TEST SET				

FSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-007
PROJECT #: WORK ORDER: E60KK
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:10
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-18
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A) SONICATION - Low Level Q: SW846 Method 8081A Standard List (A-13-QJ-01) E60KK-1-AA Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	9/03/02	10/13/02
Moisture, Percent (160.3) NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION (A-88-WM-01) E60KK-1-AC Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	0/00/00	11/27/02

Chain of Custody Record

Cux 5 de 10

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client			Project Manager						Date	Chain of Custody Number																	
Address			Telephone Number (Area Code)/Fax Number						Lab Number	Page _____ of _____																	
City		State	Zip Code	Site Contact			Lab Contact			Analysis (Attach list if more space is needed)							Special Instructions/ Conditions of Receipt										
Project Name and Location (State)			Carrier/Waybill Number																								
STS									8/20/02		147687																
750 Corporate Woods Pkwy			(847) 279-2500								Page ____ of ____																
VERNON HILL		IL	60061	Dumms																							
BMO			FEDEX 834998434687																								
Contract/Purchase Order/Quote No.				Matrix				Containers & Preservatives																			
25585-KI																											
Sample I.D. No. and Description <small>(Containers for each sample may be combined on one line)</small>				Date	Time	Air	Aqueous	Sed	Soil	Unpres.	H ₂ SO ₄	HNO ₃	HCl	NaOH	ZnAc	NaOH											
J-16				8/20/02	10:27				X									X	HOLDING							SUX46 8081	
I-16					10:45				K									K								PESTICIDES	
I-18					11:00				K									K								ALDRIN	
F-21					1340				X									X								alpha-DHC	
F-14					1320				K									X								CHLORDANE, TC	
F-16					1300				X									X								Dieldrin	
F-18					1310				X									X								Heptachlor	
																										HEPTACHLOR EPO	
																										LINDANE	
																										4,4' DDT	
																										(THESE ONLY.)	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

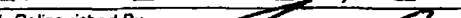
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By 	Date 8/25/02	Time 11:17	1. Received By Melissa Gahmer	Date 8/21/02	Time 9:45
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Powell, John

From: Kornder, Steve [Kornder@stsconsultants.com]
Sent: Wednesday, August 21, 2002 10:15 AM
To: Powell, John
Subject: Pesticide Samples

Morning John,

The lab should receive seven samples from STS this morning for pesticide analysis. One of those samples (J16) was mistakenly sent and should not be analyzed. Please delete this sample from your analysis log.

As always, any information yet on when we might be able to expect results on the samples (a total of eight) that are currently at the lab.

Thanks again,

Steve

ph: (817) 279-2448

Lot No.: F2H210313

Condition Upon Receipt Form
St. Louis Laboratory

Client: STS

Date: 8/21/02 Time: 9:45

Quote No: 43710

Initiated by: MMZ

Shipper/No: 829 38731606

COC/RFA Numbers: 147687

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within 4°C ± 2°C*	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
	Record temperature: <u>6</u>	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
3. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Sample received with proper pH**.	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on cooler.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	9. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is".
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: Melissa Spomer Date: 8/21/02

Project Management Review: [Signature] Date: 08-22-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED

IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM

Inv 16023045

SEVERN
TRENT
SERVICES

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT


Waste Characterization

Lot #: F2H280172

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.



John D. Powell
Project Manager

September 3, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

LOT# F2H280172

Case Narrative
LOT NUMBER: F2H280172

This report contains the analytical results for the six samples received under chain of custody by STL St. Louis on August 27, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2H280172 (2): H-18

F2H280172 (5): D.5-20

F2H280172 (4): D.5-18

F2H280172 (6): J.5-8

Affected Methods:

8081A

Case Narrative:

The reporting limit for these samples is elevated due to the presence of interfering, non-target, compounds. The presence of several large peaks and baseline interferences is observed in the associated sample matrix.

METHODS SUMMARY

F2H280172

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H280172

WC #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E7A8F	001	H-16	08/23/02	13:50
E7A8N	002	H-18	08/23/02	13:40
E7A8P	003	D.5-16	08/23/02	13:45
E7A8T	004	D.5-18	08/23/02	13:50
E7A8X	005	D.5-20	08/23/02	13:55
E7A81	006	J.5-8	08/23/02	14:20

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, pour filter test, pH, peroxide pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-16

GC Semivolatiles

Lot-Sample #....: F2H280172-001 Work Order #....: E7A8F1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 13:16
Dilution Factor: 1
% Moisture.....: 12 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	ND	19	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	7.6	ug/kg
Endrin	ND	1.9	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Decachlorobiphenyl	64	(50 - 151)
Tetrachloro-m-xylene	76	(64 - 131)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-16

General Chemistry

Lot-Sample #....: F2H280172-001 Work Order #....: E7A8F Matrix.....: SOLID
Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.7	0.10	%	MCAHW 160.3 MOD	08/29/02	2241566
		Dilution Factor: 1		Analysis Time...: 22:40		

LOT# F2H280172

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-18

GC Semivolatiles

Lot-Sample #....: F2H280172-002 Work Order #....: E7A8N1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:40 Date Received...: 08/27/02 /
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 13:59
Dilution Factor: 5
% Moisture.....: 13 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	9.7	ug/kg
alpha-BHC	ND	9.7	ug/kg
gamma-BHC (Lindane)	ND	9.7	ug/kg
Chlordane (technical)	ND	97	ug/kg
4,4'-DDT	ND	9.7	ug/kg
Dieldrin	ND	9.7	ug/kg
Heptachlor	12	9.7	ug/kg
Heptachlor epoxide	5.8 J	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-18

General Chemistry

Lot-Sample #...: F2H280172-002 Work Order #...: E7A8N Matrix.....: SOLID
Date Sampled...: 08/23/02 13:40 Date Received...: 08/27/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	12.6	0.10	%	MCANW 160.3 MOD	08/29/02	2241566
		Dilution Factor: 1		Analysis Time...: 22:40		

LOT# F2H280172

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-16

GC Semivolatiles

Lot-Sample #....: F2H280172-003 Work Order #....: E7A8P1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:45 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 14:13
Dilution Factor: 1
% Moisture.....: 22 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	0.82 J	2.2	ug/kg
alpha-BHC	0.76 J	2.2	ug/kg
gamma-BHC (Lindane)	ND	2.2	ug/kg
Chlordane (technical)	ND	22	ug/kg
4,4'-DDT	ND	2.2	ug/kg
Dieldrin	0.81 J	2.2	ug/kg
Heptachlor	1.5 J, COL	2.2	ug/kg
Heptachlor epoxide	ND	8.6	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	88	(50 - 151)
Tetrachloro-m-xylene	69	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-16

General Chemistry

Lot-Sample #....: F2H280172-003 Work Order #....: E7A8P Matrix.....: SOLID
Date Sampled....: 08/23/02 13:45 Date Received...: 08/27/02
% Moisture.....: 22

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	22.1	0.10	%	MCANW 160.3 MOD	08/29/02	2241566
Dilution Factor: 1				Analysis Time...: 22:40		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-18

GC Semivolatiles

Lot-Sample #....: F2H280172-004 Work Order #....: E7A8T1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 14:27
Dilution Factor: 10
% Moisture.....: 20 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	21	ug/kg
alpha-BHC	ND	21	ug/kg
gamma-BHC (Lindane)	ND	21	ug/kg
Chlordane (technical)	ND	210	ug/kg
4,4'-DDT	ND	21	ug/kg
Dieldrin	ND	21	ug/kg
Heptachlor	31	21	ug/kg
Heptachlor epoxide	ND	84	ug/kg

← revised reporting
limit to 43 ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

(see 10/14/02 rpt)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: D.5-18

General Chemistry

Lot-Sample #....: F2H280172-004 Work Order #....: E7A8T Matrix.....: SOLID
Date Sampled....: 08/23/02 13:50 Date Received...: 08/27/02
% Moisture.....: 20

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	20.3	0.10	%	MCAW 160.3 MOD	08/29/02	2241566
		Dilution Factor: 1		Analysis Time...: 22:40		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: D.5-20

GC Semivolatiles

Lot-Sample #....: F2H280172-005 Work Order #....: E7A8X1AA Matrix.....: SOLID
Date Sampled....: 08/23/02 13:55 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 14:41
Dilution Factor: 10
% Moisture.....: 25 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	15 J	23	ug/kg
alpha-BHC	6.2 J, COL	23	ug/kg
gamma-BHC (Lindane)	ND	23	ug/kg
Chlordane (technical)	ND	230	ug/kg
4,4'-DDT	8.5 J, COL	23	ug/kg
Dieldrin	ND	23	ug/kg
Heptachlor	19 J, COL	23	ug/kg
Heptachlor epoxide	55 J, COL	89	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: D.5-20

General Chemistry

Lot-Sample #....: F2H280172-005 Work Order #....: E7A8X Matrix.....: SOLID
Date Sampled....: 08/23/02 13:55 Date Received...: 08/27/02
% Moisture.....: 25

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	24.8	0.10	%	MCANW 160.3 MOD	08/29/02	2241566
		Dilution Factor: 1		Analysis Time...: 22:40		

LOT# F2H280172

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J.5-8

GC Semivolatiles

Lot-Sample #....: F2H280172-006 Work Order #....: E7A811AA Matrix.....: SOLID
Date Sampled....: 08/23/02 14:20 Date Received...: 08/27/02
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 14:55
Dilution Factor: 10
% Moisture.....: 21 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	22	ug/kg
alpha-BHC	ND	22	ug/kg
gamma-BHC (Lindane)	ND	22	ug/kg
Chlordane (technical)	ND	220	ug/kg
4,4'-DDT	ND	22	ug/kg
Dieldrin	ND	22	ug/kg
Heptachlor	ND	22	ug/kg
Heptachlor epoxide	ND	85	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: J.5-8

General Chemistry

Lot-Sample #....: F2H280172-006 Work Order #....: E7A81 Matrix.....: SOLID
Date Sampled...: 08/23/02 14:20 Date Received...: 08/27/02
% Moisture.....: 21

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	21.3	0.10	%	MCANW 160.3 MOD	08/29/02	2241566
Dilution Factor: 1				Analysis Time...: 22:40		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H280172
MB Lot-Sample #: D2H290000-300

Work Order #....: E7FAA1AA

Matrix.....: SOLID

Analysis Date...: 08/30/02
Dilution Factor: 1

Prep Date.....: 08/29/02

Analysis Time...: 15:09

Prep Batch #....: 2241300

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Decachlorobiphenyl	86	(50 - 151)
Tetrachloro-m-xylene	82	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H280172 Work Order #....: E7FAA1AC Matrix.....: SOLID
LCS Lot-Sample#: D2H290000-300
Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
Prep Batch #....: 2241300 Analysis Time...: 13:02
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	87	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	86	(69 - 131)	SW846 8081A
4,4'-DDT	68	(65 - 150)	SW846 8081A
Dieldrin	89	(73 - 133)	SW846 8081A
Heptachlor	81	(63 - 146)	SW846 8081A
Endrin	96	(70 - 137)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	91	(50 - 151)
Tetrachloro-m-xylene	86	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H280172 Work Order #....: E7A8F1AF-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H280172-001 E7A8F1AG-MSD
 Date Sampled...: 08/23/02 13:50 Date Received...: 08/27/02
 Prep Date.....: 08/29/02 Analysis Date...: 08/30/02
 Prep Batch #....: 2241300 Analysis Time...: 13:30
 Dilution Factor: 1 % Moisture.....: 12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	86	(72 - 129)			SW846 8081A
	88	(72 - 129)	2.2	(0-30)	SW846 8081A
gamma-BHC (Lindane)	85	(69 - 131)			SW846 8081A
	86	(69 - 131)	1.0	(0-30)	SW846 8081A
4,4'-DDT	95	(65 - 150)			SW846 8081A
	98	(65 - 150)	3.1	(0-30)	SW846 8081A
Dieldrin	85	(73 - 133)			SW846 8081A
	87	(73 - 133)	3.0	(0-30)	SW846 8081A
Heptachlor	93	(63 - 146)			SW846 8081A
	94	(63 - 146)	0.53	(0-30)	SW846 8081A
Endrin	88	(70 - 137)			SW846 8081A
	99	(70 - 137)	11	(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	67	(50 - 151)
	69	(50 - 151)
Tetrachloro-m-xylene	82	(64 - 131)
	83	(64 - 131)

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

Sewern Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITIONLABORATORY: STL Denver
4955 Yarrow Street
ArvadaNEED ANALYTICAL REPORT BY
9/02/02

CO 83002, POW EL

ATTN:

LAB PURCHASE ORDER: SR041469

CLIENT CODE: 378708 PROJECT MANAGER: John D. Powell

NUMBER OF SAMPLES IN LOT: 0006

<u>SAMPLE I.D.</u>	<u>SAMPLING DATE</u>	<u>ANALYSIS REQUIRED</u>
F2H280172-001 E7A8P-1-AA	8/23/02	Pesticides (8081A) (GC8081_S) METHOD: 8081A
F2H280172-001 E7A8P-1-AC	8/23/02	Moisture, Percent (160.3) (%MOIST) METHOD: 160.3 MOD
F2H280172-002 E7A8N-1-AA	8/23/02	Pesticides (8081A) (GC8081_S) METHOD: 8081A
F2H280172-002 E7A8N-1-AC	8/23/02	Moisture, Percent (160.3) (%MOIST) METHOD: 160.3 MOD
F2H280172-003 E7A8P-1-AA	8/23/02	Pesticides (8081A) (GC8081_S) METHOD: 8081A
F2H280172-003 E7A8P-1-AC	8/23/02	Moisture, Percent (160.3) (%MOIST) METHOD: 160.3 MOD
F2H280172-004 E7A8T-1-AA	8/23/02	Pesticides (8081A) (GC8081_S) METHOD: 8081A
F2H280172-004 E7A8T-1-AC	8/23/02	Moisture, Percent (160.3) (%MOIST) METHOD: 160.3 MOD
F2H280172-005 E7A8X-1-AA	8/23/02	Pesticides (8081A) (GC8081_S) METHOD: 8081A
F2H280172-005 E7A8X-1-AC	8/23/02	Moisture, Percent (160.3) (%MOIST) METHOD: 160.3 MOD

* CONTINUED *

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITIONLABORATORY: STL Denver
4955 Yarrow Street
Arvada

CO 80002, POW EL

NEED ANALYTICAL REPORT BY
9/02/02
RUSH

ATTN:

LAB PURCHASE ORDER: SR041469

CLIENT CODE: 378708 PROJECT MANAGER: John D. Powell

NUMBER OF SAMPLES IN LOT: 0006

<u>SAMPLE I.D.</u>	<u>SAMPLING DATE</u>	<u>ANALYSIS REQUIRED</u>
F2H280172-006	8/23/02	Pesticides (8081A)
E7A81-1-AA		(GC8081_S) METHOD: 8081A
F2H280172-006	8/23/02	Moisture, Percent (160.3)
E7A81-1-AC		(%MOIST) METHOD: 160.3 MOD

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: CLIENT

DATE: 8/28/02

SEND REPORT TO: JOHN POWELL

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL St. Louis

INT: _____

8/28/02 16:28:19

STL Denver
4955 Yarrow Street
Arvada

CO 80002, POW EL

RELINQUISHED BY: *RC'd* *Brown*DATE/TIME: *8/28/02 1630*

RELINQUISHED BY: _____

DATE/TIME: _____

RECEIVED FOR LAB BY: _____

DATE/TIME: _____

*(COC ~
sampled
8/27/02
030)*

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Sample Receiving Checklist

Lot #: F 22H280172Date/Time Received: 8/28/02Company Name & Sampling Site: STS - SH St Louis*Cooler #(s): 1Temperatures (°C): 4.6

PM to Complete This Section: Yes

No

Residual chlorine check required: ☐☐

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking & Labeling Check Points:

N/A Yes No

- ☒ ☒ 1. Cooler seals intact. (N/A if hand delivered)
- ☒ ☐ 2. Chain of custody present.
- ☐ ☒ 3. Bottles broken and/or are leaking, comment if yes.
- ☐ ☒ 4. Multiphase samples present? If yes, comment below.

PHOTOGRAPH BROKEN BOTTLES/MULTIPHASE SAMPLES

- ☒ ☐ 5. Proper container & preservatives used (ref. Attachment D of SOP# DEN-QA-0003)
- ☒ ☐ 6. pH of all samples checked and meet requirements, note exceptions.
- ☒ ☐ 7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.
- ☒ ☐ 8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☒ ☐ 9. Chain of custody agrees with bottle count, comment if no.
- ☒ ☐ 10. Chain of custody agrees with labels, comment if no.
- ☒ ☐ 11. VOA samples filled completely, comment if no.
- ☒ ☐ 12. VOA vials preserved, check label. Preservative ☐ HCl ☐ 4±2°C ☐ Sodium Thiosulfate
- ☐ ☒ 13. Did samples require preservation with sodium thiosulfate?
- ☒ ☐ 14. If yes to #12, did the samples contain residual chlorine?
- ☒ ☐ 15. Sediment present in dissolved/filtered bottles.
- ☐ ☒ 16. Are analyses with short holding times requested?
- ☒ ☐ 17. Was a quick Turn Around (TAT) requested?
- ☒ ☐ 18. Is extra sample volume provided for MS, MSD or matrix duplicates?

DOUBLECHECK METALS, SAMPLE LABELS & SUBCONTRACT

- ☒ ☐ 19. Subcontract COC signed and sent with samples to bottle prep?
- ☒ ☐ 20. Were sample labels double-checked by a second person?
- ☒ ☐ 21. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☒ ☐ 22. If applicable, were AFCEE Metals placed in the walkin refrigerator?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

Chain of Custody Record

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0801)

Client: STS Project Manager: Rick Berggren Date: 8/26/02 Chain of Custody Number: 147747

Address: 750 CORPORALEDGE PKWY Telephone Number (Area Code)/Fax Number: (847) 279-2000 Lab Number: _____ Page 1 of 1

City: VERNON HILLS State: IL Zip Code: 60061 Site Contact: DUMAS Lab Contact: J. Powell

Project Name and Location (State): BMD 25586-XI Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives						Test	Temp (C)						
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc								
H-16	8/23/02	1350				X								X						SLCP46 8081
H-18	↓	1340																		PESTICIDES:
D.5-16		1345																		ALPHA-BHC
D.5-18		1350																		CHLORDANE TECH
D.5-20		1355																		Dieldrin
T.5-8		1420																		HEPTACHLOR
Temp Blank	8/26/02		X												X					HEPTACHLOR EPOXIDE
																				LINDANE
																				4,4'DDT
																				(THESE ONLY)

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

1. Relinquished By: [Signature] Date: 8/26/02 Time: 11:15 AM 1. Received By: [Signature] Date: 8/27/02 Time: 0830

2. Relinquished By: _____ Date: _____ Time: _____ 2. Received By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____ 3. Received By: _____ Date: _____ Time: _____

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Inv
#16022976

SEVERN
TRENT
SERVICES

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

For info

ANALYTICAL REPORT

Waste Characterization

Lot #: F2H210313

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.

John D. Powell

John D. Powell
Project Manager

August 28, 2002

Case Narrative
LOT NUMBER: F2H210313

This report contains the analytical results for the seven samples received under chain of custody by STL St. Louis on August 21, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2H210313 (2): I-16
F2H210313 (3): I-18

F2H210313 (4): F-21
F2H210313 (5): F-14

Affected Methods:

8081A

Case Narrative:

The reporting limit for these samples is elevated due to the presence of interfering, non-target, compounds. The associated sample extracts were yellow to brown in color. Matrix interferences (large peaks) are observed in the sample chromatograms.

METHODS SUMMARY

F2H210313

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H210313

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E60KE	002	I-16	08/20/02	10:45
E60KP	003	I-18	08/20/02	11:00
E60KG	004	F-21	08/20/02	13:40
E60KH	005	F-14	08/20/02	13:20
E60KJ	006	F-16	08/20/02	13:00
E60KK	007	F-18	08/20/02	13:10

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-16

GC Semivolatiles

Lot-Sample #....: F2H210313-002 Work Order #....: E60KE1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 10:45 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 19:13
 Dilution Factor: 5
 % Moisture.....: 16 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	10	ug/kg
alpha-BHC	ND	10	ug/kg
beta-BHC	ND	10	ug/kg
delta-BHC	ND	10	ug/kg
gamma-BHC (Lindane)	ND	10	ug/kg
Chlordane (technical)	68 J, COL	100	ug/kg
4,4'-DDD	ND	10	ug/kg
4,4'-DDE	6.8 J	10	ug/kg
4,4'-DDT	ND	10	ug/kg
Dieldrin	5.0 J	10	ug/kg
Endrin	4.0 J	10	ug/kg
Endrin aldehyde	ND	10	ug/kg
Endosulfan I	ND	10	ug/kg
Endosulfan II	ND	10	ug/kg
Endosulfan sulfate	ND	10	ug/kg
Heptachlor	3.7 J	10	ug/kg
Heptachlor epoxide	ND	40	ug/kg
Methoxychlor	ND	20	ug/kg
Toxaphene	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-16

General Chemistry

Lot-Sample #....: F2H210313-002 Work Order #....: E60KE Matrix.....: SOLID
Date Sampled....: 08/20/02 10:45 Date Received...: 08/21/02
% Moisture.....: 16

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	15.6	0.10	%	NCAPW 160.3 MOD	08/27/02	2239419
Dilution Factor: 1				Analysis Time...: 15:15		

LOT# F2H210313

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-18

GC Semivolatiles

Lot-Sample #....: F2H210313-003 Work Order #....: E60KF1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 11:00 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 19:42
 Dilution Factor: 5
 % Moisture.....: 7.7 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	9.2	ug/kg
alpha-BHC	ND	9.2	ug/kg
beta-BHC	ND	9.2	ug/kg
delta-BHC	ND	9.2	ug/kg
gamma-BHC (Lindane)	ND	9.2	ug/kg
Chlordane (technical)	ND	92	ug/kg
4,4'-DDD	ND	9.2	ug/kg
4,4'-DDE	7.2 J, COL	9.2	ug/kg
4,4'-DDT	ND	9.2	ug/kg
Dieldrin	ND	9.2	ug/kg
Endrin	ND	9.2	ug/kg
Endrin aldehyde	ND	9.2	ug/kg
Endosulfan I	ND	9.2	ug/kg
Endosulfan II	ND	9.2	ug/kg
Endosulfan sulfate	ND	9.2	ug/kg
Heptachlor	ND	9.2	ug/kg
Heptachlor epoxide	ND	36	ug/kg
Methoxychlor	ND	18	ug/kg
Toxaphene	ND	920	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-18

General Chemistry

Lot-Sample #....: F2H210313-003 Work Order #....: E60KF Matrix.....: SOLID
Date Sampled....: 08/20/02 11:00 Date Received...: 08/21/02
% Moisture.....: 7.7

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	7.7	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

LOT# F2H210313

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-21

GC Semivolatiles

Lot-Sample #....: F2H210313-004 Work Order #....: E60KG1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 13:40 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 20:11
 Dilution Factor: 5
 % Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	11	ug/kg
alpha-BHC	ND	11	ug/kg
beta-BHC	ND	11	ug/kg
delta-BHC	ND	11	ug/kg
gamma-BHC (Lindane)	ND	11	ug/kg
Chlordane (technical)	ND	110	ug/kg
4,4'-DDD	5.9 J	11	ug/kg
4,4'-DDE	ND	11	ug/kg
4,4'-DDT	ND	11	ug/kg
Dieldrin	ND	11	ug/kg
Endrin	ND	11	ug/kg
Endrin aldehyde	ND	11	ug/kg
Endosulfan I	4.2 J	11	ug/kg
Endosulfan II	ND	11	ug/kg
Endosulfan sulfate	ND	11	ug/kg
Heptachlor	ND	11	ug/kg
Heptachlor epoxide	5.2 J, COL	42	ug/kg
Methoxychlor	ND	20	ug/kg
Toxaphene	ND	1100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-21

General Chemistry

Lot-Sample #....: F2H210313-004 Work Order #....: E60KG Matrix.....: SOLID
Date Sampled....: 08/20/02 13:40 Date Received...: 08/21/02
% Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	19.3	0.10	%	MCAMW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

GC Semivolatiles

Lot-Sample #....: F2H210313-005 Work Order #....: E60KH1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 13:20 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 20:40
 Dilution Factor: 5
 % Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	10	ug/kg
alpha-BHC	ND	10	ug/kg
beta-BHC	ND	10	ug/kg
delta-BHC	ND	10	ug/kg
gamma-BHC (Lindane)	ND	10	ug/kg
Chlordane (technical)	ND	100	ug/kg
4,4'-DDD	ND	10	ug/kg
4,4'-DDE	3.1 J, COL	10	ug/kg
4,4'-DDT	ND	10	ug/kg
Dieldrin	ND	10	ug/kg
Endrin	9.5 J	10	ug/kg
Endrin aldehyde	ND	10	ug/kg
Endosulfan I	3.6 J	10	ug/kg
Endosulfan II	ND	10	ug/kg
Endosulfan sulfate	ND	10	ug/kg
Heptachlor	ND	10	ug/kg
Heptachlor epoxide	4.6 J	40	ug/kg
Methoxychlor	ND	20	ug/kg
Toxaphene	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-14

General Chemistry

Lot-Sample #....: F2H210313-005 Work Order #....: E60KH Matrix.....: SOLID
Date Sampled....: 08/20/02 13:20 Date Received...: 08/21/02
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17.0	0.10	%	MCAFW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-16

GC Semivolatiles

Lot-Sample #....: F2H210313-006 Work Order #....: E60KJ1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 13:00 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 21:09
 Dilution Factor: 1
 % Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	2.0	ug/kg
alpha-BHC	0.59 J, COL	2.0	ug/kg
beta-BHC	ND	2.0	ug/kg
delta-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Chlordane (technical)	ND	20	ug/kg
4,4'-DDD	ND	2.0	ug/kg
4,4'-DDE	1.0 J	2.0	ug/kg
4,4'-DDT	ND	2.0	ug/kg
Dieldrin	ND	2.0	ug/kg
Endrin	ND	2.0	ug/kg
Endrin aldehyde	ND	2.0	ug/kg
Endosulfan I	0.73 J, COL	2.0	ug/kg
Endosulfan II	ND	2.0	ug/kg
Endosulfan sulfate	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Heptachlor epoxide	ND	7.8	ug/kg
Methoxychlor	ND	3.9	ug/kg
Toxaphene	ND	200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	70	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-16

General Chemistry

Lot-Sample #....: F2H210313-006 Work Order #....: E60KJ Matrix.....: SOLID
Date Sampled....: 08/20/02 13:00 Date Received...: 08/21/02
% Moisture.....: 15

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	14.6	0.10	%	MCANW 160.3 MOD	08/27/02	2239419
		Dilution Factor: 1		Analysis Time...: 15:15		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-18

GC Semivolatiles

Lot-Sample #....: F2H210313-007 Work Order #....: E60KK1AA Matrix.....: SOLID
 Date Sampled....: 08/20/02 13:10 Date Received...: 08/21/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 21:39
 Dilution Factor: 1
 % Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aldrin	1.0 J	2.1	ug/kg
alpha-BHC	ND	2.1	ug/kg
beta-BHC	ND	2.1	ug/kg
delta-BHC	ND	2.1	ug/kg
gamma-BHC (Lindane)	ND	2.1	ug/kg
Chlordane (technical)	ND	21	ug/kg
4,4'-DDD	ND	2.1	ug/kg
4,4'-DDE	ND	2.1	ug/kg
4,4'-DDT	ND	2.1	ug/kg
Dieldrin	ND	2.1	ug/kg
Endrin	ND	2.1	ug/kg
Endrin aldehyde	ND	2.1	ug/kg
Endosulfan I	0.71 J,COL	2.1	ug/kg
Endosulfan II	ND	2.1	ug/kg
Endosulfan sulfate	ND	2.1	ug/kg
Heptachlor	ND	2.1	ug/kg
Heptachlor epoxide	ND	8.1	ug/kg
Methoxychlor	ND	4.0	ug/kg
Toxaphene	ND	210	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	77	(50 - 151)
Tetrachloro-m-xylene	97	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-18

General Chemistry

Lot-Sample #....: F2H210313-007 Work Order #....: E60KK Matrix.....: SOLID
Date Sampled...: 08/20/02 13:10 Date Received...: 08/21/02
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17.5	0.10	%	MCAW 160.3 MOD	08/27/02	2239419
Dilution Factor: 1				Analysis Time...: 15:15		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H210313
 MB Lot-Sample #: D2H220000-216

Work Order #....: E61LW1AA

Matrix.....: SOLID

Analysis Date...: 08/26/02

Prep Date.....: 08/22/02

Analysis Time...: 17:16

Dilution Factor: 1

Prep Batch #....: 2234216

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Endrin aldehyde	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A
Methoxychlor	ND	3.3	ug/kg	SW846 8081A
Toxaphene	ND	170	ug/kg	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	99	(50 - 151)
Tetrachloro-m-xylene	100	(64 - 131)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H210313 Work Order #....: E61LW1AC Matrix.....: SOLID
LCS Lot-Sample#: D2H220000-216
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 14:49
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	93	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	92	(69 - 131)	SW846 8081A
4,4'-DDT	87	(65 - 150)	SW846 8081A
Dieldrin	92	(73 - 133)	SW846 8081A
Endrin	96	(70 - 137)	SW846 8081A
Heptachlor	98	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	94	(50 - 151)
Tetrachloro-m-xylene	102	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H210313 Work Order #....: E6VCA1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H200218-001 E6VCA1AE-MSD
 Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
 Prep Batch #....: 2234216 Analysis Time...: 17:45
 Dilution Factor: 50 % Moisture.....: 9.6

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	NC, DIL	(72 - 129)			SW846 8081A
	NC, DIL	(72 - 129)		(0-30)	SW846 8081A
gamma-BHC (Lindane)	NC, DIL	(69 - 131)			SW846 8081A
	NC, DIL	(69 - 131)		(0-30)	SW846 8081A
4,4'-DDT	NC, DIL	(65 - 150)			SW846 8081A
	NC, DIL	(65 - 150)		(0-30)	SW846 8081A
Dieldrin	NC, DIL	(73 - 133)			SW846 8081A
	NC, DIL	(73 - 133)		(0-30)	SW846 8081A
Endrin	NC, DIL	(70 - 137)			SW846 8081A
	NC, DIL	(70 - 137)		(0-30)	SW846 8081A
Heptachlor	NC, DIL	(63 - 146)			SW846 8081A
	NC, DIL	(63 - 146)		(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0	(50 - 151)
	Qualifiers: DIL, NC	
	0.0	(50 - 151)
	Qualifiers: DIL, NC	
Tetrachloro-m-xylene	0.0	(64 - 131)
	Qualifiers: DIL, NC	
	0.0	(64 - 131)
	Qualifiers: DIL, NC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

PSL20300

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SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/21/02

Time: 16:00:36

User Id.: WILSONS

CLIENT: 378703 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-001
PROJECT #: WORK ORDER: E60KD
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: S7 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 10:27
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: J-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
<u>LOC</u>	<u>DATE</u>	<u>EXP DATE</u>	<u>EXP DATE</u>

Archive	06	8/21/02	0/00/00	11/27/02
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NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-ZZ-01) E60KD-1-AA Protocol: Z QC Program: STANDARD TEST SET

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:36
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-002
PROJECT #: WORK ORDER: E60KE
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 10:45
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: I-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
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Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
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SONICATION - Low Level

Q: SW846 Method 8081A Standard List

'A-13-QJ-01) E60KE-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
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NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E60KE-1-AC Protocol: A QC Program: STANDARD TEST SET

PSL20300

SEVERN TRENT LABORATORIES, INC

Run Date: 8/21/02

Page 1

CLIENT ANALYSIS SUMMARY

Time: 16:00:37

STL St. Louis

User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-003
PROJECT #:
REPORT TO: Rich Berggreen WORK ORDER: E60KF
P.O. NUMBER: RECEIVING DATE: 8/21/02
SITE: Waste Characterization SAMPLING DATE: 8/20/02
AMOUNT REC'D: 120G ANALYTICAL DUE DATE: 8/28/02N
STORAGE LOC: STL DENVER REPORT DUE DATE: 8/28/02
LOT COMMENTS: PRIORITY: 07
MATRIX: SOLID SAMPLING TIME: 11:00
USAF MATRIX: RECEIVING TIME: 9:45
SAMPLE ID: 1-18
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E60KF-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E60KF-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-004
PROJECT #: WORK ORDER: E60KG
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:40
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-21
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
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SONICATION - Low Level

Q: SW846 Method 8081A Standard List

'A-13-QJ-01) E60KG-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
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NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E60KG-1-AC Protocol: A QC Program: STANDARD TEST SET

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/21/02

Time: 16:00:37

User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-005
PROJECT #: WORK ORDER: E60KH
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: C7
LOT COMMENTS: SAMPLING TIME: 13:20
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-14
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	<u>WRK</u> <u>LOC</u>	<u>REQUEST</u> <u>DATE</u>	<u>EXTRACTION</u> <u>EXP DATE</u>	<u>ANALYSIS</u> <u>EXP DATE</u>
Pesticides (8081A) SONICATION - Low Level Q: SW846 Method 8081A Standard List (A-13-QJ-01) E60KH-1-AA Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	9/03/02	10/13/02
Moisture, Percent (160.3) NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION (A-88-WM-01) E60KH-1-AC Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	0/00/00	11/27/02

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-006
PROJECT #: WORK ORDER: E60KJ
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:00
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-16
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
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Pesticides (8081A)	04	8/21/02	9/03/02	10/13/02
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SONICATION - Low Level

Q: SW846 Method 8081A Standard List

(A-13-QJ-01) E60KJ-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/27/02
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NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E60KJ-1-AC Protocol: A QC Program: STANDARD TEST SET

FSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 16:00:37
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H210313-007
PROJECT #: WORK ORDER: E60KK
REPORT TO: Rich Berggreen RECEIVING DATE: 8/21/02
P.O. NUMBER: SAMPLING DATE: 8/20/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/28/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/28/02
STORAGE LOC: STLDENVER PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:10
MATRIX: SOLID RECEIVING TIME: 9:45
USAF MATRIX:
SAMPLE ID: F-18
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

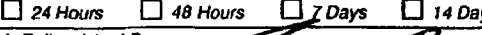
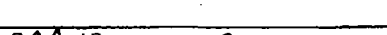
	<u>WRK</u> <u>LOC</u>	<u>REQUEST</u> <u>DATE</u>	<u>EXTRACTION</u> <u>EXP DATE</u>	<u>ANALYSIS</u> <u>EXP DATE</u>
Pesticides (8081A) SONICATION - Low Level Q: SW846 Method 8081A Standard List (A-13-QJ-01) E60KK-1-AA Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	9/03/02	10/13/02
Moisture, Percent (160.3) NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION (A-88-WM-01) E60KK-1-AC Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	0/00/00	11/27/02

CWC 540

SEVERN
TRENT
SERVICES

Severn Trent Laboratories, Inc.

[illegible]

Possible Hazard Identification			Sample Disposal			(A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For _____ Months		
Turn Around Time Required					OC Requirements (Specify)				
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other _____				
1. Relinquished By 			Date	Time	1. Received By 			Date	Time
2. Relinquished By			Date	Time	2. Received By			Date	Time
3. Relinquished By			Date	Time	3. Received By			Date	Time
Comments									

Powell, John

From: Kornder, Steve [Kornder@stsconsultants.com]
Sent: Wednesday, August 21, 2002 10:15 AM
To: Powell, John
Subject: Pesticide Samples

Morning John,

The lab should receive seven samples from STS this morning for pesticide analysis. One of those samples (J16) was mistakenly sent and should not be analyzed. Please delete this sample from your analysis log.

As always, any information yet on when we might be able to expect results on the samples (a total of eight) that are currently at the lab.

Thanks again,

Steve

ph: (847) 279-2448

Lot No.: F2H210313

Condition Upon Receipt Form
St. Louis Laboratory

Client: STS

Date: 8/21/02 Time: 9:45

Quote No: 43210

Initiated by: MMZ

Shipper/No: 82938731606

COC/RFA Numbers: 147687

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}^*$	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
	Record temperature: <u>6</u>	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
3. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Sample received with proper pH**.	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on cooler.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	9. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: Melissa Hammer Date: 8/21/02

Project Management Review: [Signature] Date: 08-22-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM

Inv
#16022975



*See
revised
report*

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

Waste Characterization

Lot #: F2H200218

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "J. Powell".

John D. Powell
Project Manager

August 28, 2002

Case Narrative
LOT NUMBER: F2H200218

This report contains the analytical results for the two samples received under chain of custody by STL St. Louis on August 20, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:
F2H200218 (1): H-6

Affected Methods:
8081A

Case Narrative:

The reporting limit for sample(s) F2H200218-1 and F2H210313-2, 3, 4, 5 is elevated due to the presence of interfering, non-target, compounds. The associated sample extracts were yellow to brown in color. Matrix interferences (large peaks) are observed in the sample chromatograms.

METHODS SUMMARY**F2H200218**

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H200218

MO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E6VCA	001	H-6	08/19/02	14:00
E6VCK	002	H-14	08/19/02	14:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, particulate matter, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6

GC Semivolatiles

Lot-Sample #....: F2H200218-001 Work Order #....: E6VCA1AA Matrix.....: SOLID
 Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
 Prep Batch #....: 2234216 Analysis Time...: 17:16
 Dilution Factor: 50
 % Moisture.....: 9.6 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	49 J	94	ug/kg
alpha-BHC	ND	94	ug/kg
beta-BHC	ND	94	ug/kg
delta-BHC	ND	94	ug/kg
gamma-BHC (Lindane)	ND	94	ug/kg
Chlordane (technical)	13000	940	ug/kg
4,4'-DDD	25 J, COL	94	ug/kg
4,4'-DDE	45 J	94	ug/kg
4,4'-DDT	29 J	94	ug/kg
Dieldrin	51 J	94	ug/kg
Endrin	85 J	94	ug/kg
Endrin aldehyde	ND	94	ug/kg
Endosulfan I	49 J	94	ug/kg
Endosulfan II	ND	94	ug/kg
Endosulfan sulfate	ND	94	ug/kg
Heptachlor	1400	94	ug/kg
Heptachlor epoxide	ND	370	ug/kg
Methoxychlor	ND	180	ug/kg
Toxaphene	ND	9400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL, NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL, NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6

General Chemistry

Lot-Sample #....: F2H200218-001 Work Order #....: E6VCA Matrix.....: SOLID
Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
% Moisture.....: 9.6

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	9.6	0.10	%	MCAMW 160.3 MOD	08/26/02	2238529
		Dilution Factor: 1		Analysis Time...: 19:30		

LOT# F2H200218

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-14

GC Semivolatiles

Lot-Sample #....: F2H200218-002 Work Order #....: E6VCK1AA Matrix.....: SOLID
 Date Sampled....: 08/19/02 14:30 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
 Prep Batch #....: 2234216 Analysis Time...: 16:46
 Dilution Factor: 1
 % Moisture.....: 5.4 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
beta-BHC	ND	1.8	ug/kg
delta-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDD	ND	1.8	ug/kg
4,4'-DDE	ND	1.8	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Endrin	ND	1.8	ug/kg
Endrin aldehyde	ND	1.8	ug/kg
Endosulfan I	ND	1.8	ug/kg
Endosulfan II	ND	1.8	ug/kg
Endosulfan sulfate	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	0.70 J, COL	7.1	ug/kg
Methoxychlor	ND	3.5	ug/kg
Toxaphene	ND	180	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-14

General Chemistry

Lot-Sample #....: F2H200218-002 Work Order #....: E6VCK Matrix.....: SOLID
Date Sampled....: 08/19/02 14:30 Date Received...: 08/20/02
% Moisture.....: 5.4

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	5.4	0.10	%	MCAHW 160.3 MOD	08/26/02	2238529
		Dilution Factor: 1		Analysis Time...: 19:30		

LOT# F2H200218

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H200218
MB Lot-Sample #: D2H220000-216

Work Order #....: E61LW1AA

Matrix.....: SOLID

Analysis Date...: 08/26/02
Dilution Factor: 1

Prep Date.....: 08/22/02

Analysis Time...: 17:16

Prep Batch #....: 2234216

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Endrin aldehyde	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A
Methoxychlor	ND	3.3	ug/kg	SW846 8081A
Toxaphene	ND	170	ug/kg	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Decachlorobiphenyl	99	(50 - 151)
Tetrachloro-m-xylene	100	(64 - 131)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H200218 Work Order #....: E61LW1AC Matrix.....: SOLID
LCS Lot-Sample#: D2H220000-216
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 14:49
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	93	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	92	(69 - 131)	SW846 8081A
4,4'-DDT	87	(65 - 150)	SW846 8081A
Dieldrin	92	(73 - 133)	SW846 8081A
Endrin	96	(70 - 137)	SW846 8081A
Heptachlor	98	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	94	(50 - 151)
Tetrachloro-m-xylene	102	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Both prime denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H200218 Work Order #....: E6VCA1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H200218-001 E6VCA1AE-MSD
 Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
 Prep Batch #....: 2234216 Analysis Time...: 17:45
 Dilution Factor: 50 % Moisture.....: 9.6

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	NC, DIL	(72 - 129)			SW846 8081A
	NC, DIL	(72 - 129)		(0-30)	SW846 8081A
gamma-BHC (Lindane)	NC, DIL	(69 - 131)			SW846 8081A
	NC, DIL	(69 - 131)		(0-30)	SW846 8081A
4,4'-DDT	NC, DIL	(65 - 150)			SW846 8081A
	NC, DIL	(65 - 150)		(0-30)	SW846 8081A
Dieldrin	NC, DIL	(73 - 133)			SW846 8081A
	NC, DIL	(73 - 133)		(0-30)	SW846 8081A
Endrin	NC, DIL	(70 - 137)			SW846 8081A
	NC, DIL	(70 - 137)		(0-30)	SW846 8081A
Heptachlor	NC, DIL	(63 - 146)			SW846 8081A
	NC, DIL	(63 - 146)		(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0	(50 - 151)
	Qualifiers: DIL, NC	
	0.0	(50 - 151)
	Qualifiers: DIL, NC	
Tetrachloro-m-xylene	0.0	(64 - 131)
	Qualifiers: DIL, NC	
	0.0	(64 - 131)
	Qualifiers: DIL, NC	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 15:46:27
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H200218-001
PROJECT #: WORK ORDER: E6VCA
REPORT TO: Rich Berggreen RECEIVING DATE: 8/20/02
P.O. NUMBER: SAMPLING DATE: 8/19/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/27/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/27/02
STORAGE LOC: R158 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:00
MATRIX: SOLID RECEIVING TIME: 8:00
USAF MATRIX:
SAMPLE ID: H-6
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	04	8/21/02	9/02/02	10/12/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E6VCA-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/26/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E6VCA-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 15:46:27
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H200218-002
PROJECT #: WORK ORDER: E6VCK
REPORT TO: Rich Berggreen RECEIVING DATE: 8/20/02
P.O. NUMBER: SAMPLING DATE: 8/19/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/27/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/27/02
STORAGE LOC: R158 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 8:00
USAF MATRIX:
SAMPLE ID: H-14
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A) SONICATION - Low Level Q: SW846 Method 8081A Standard List (A-13-QJ-01) E6VCK-1-AA Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	9/02/02	10/12/02
Moisture, Percent (160.3) NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION (A-88-WM-01) E6VCK-1-AC Protocol: A QC Program: STANDARD TEST SET	04	8/21/02	0/00/00	11/26/02

PSL233

STL Derver
GC SEMI-VOLATILE ANALYSIS WORKSHEET

Run Date: 08/21/2002

Time: 15:46

User Id.:

REVIEW DATE/BY: _____

WORK ORDER: E6VCA-1-AA

QUOTE #: 43710

LAB NUMBER: F2H200218-001

STORAGE LOC: R158

CLIENT CODE: 378708

PROJECT MANAGER: John D. Powell

SITE: Waste Characterization

AMT. REC'D: 120G

SAMPLE ID: H-6

QC PACKAGE: Report

QC PROGRAM: STANDARD TEST SET

ANALYSIS CODE: XX-A-13-QJ-01 GC8081_S

SOLID, 8081A, Pesticides (Denver)

SAMPLE COMMENTS:

SAMPLING DATE: 8/19/02

RECEIVING DATE: 8/20/02

QC BATCH: _____

ANALYTICAL DUE DATE: 8/27/02N

ANALYSIS COMMENTS:

***** ANALYSIS/EXTRACTION DATA *****

METHOD: SOLID, 8081A, Pesticides (Denver)

LIST: - 02227 Q: SW846 Method 8081A Standard List

MATRIX: SOLID

EXPIRATION: EXTR ANALYSIS

EXTRACTION: SONICATION - Low Level

9/02/02 10/12/02

ANALYSIS: INSTRUMENT ID: _____

INITIAL: 0

CLEANUP: _____

RUN #: _____

FINAL: .00

SPIKE: _____

DATE: _____

SOLVENT: _____

SURROGATE: _____

BY: _____

DATE/BY: 0/00/00

DRY WT: _____

(DL) FACTOR: _____

COMMENTS:

CALIBRATION DATE: _____

UNITS: ug/kg

Dry Weighted

Endosulfan I	1.7
Endosulfan II.	1.7
Endosulfan sulfate	1.7
Heptachlor	1.7
Heptachlor epoxide	6.7
Methoxychlor	3.3
Toxaphene.	170
Aldrin	1.7
alpha-BHC.	1.7
beta-BHC	1.7
delta-BHC.	1.7
gamma-BHC (Lindane).	1.7
Chlordane (technical).	17
4,4'-DDD	1.7
4,4'-DDE	1.7
4,4'-DDT	1.7
Dieldrin	1.7
Endrin	1.7
Endrin aldehyde.	1.7

* SURROGATE RECOVERIES *

Decachlorobiphenyl

(050 - 151

)

Tetrachloro-m-xylene

(064 - 131

)

PSL233

Severn Trent Laboratories, Inc
GC SEMI-VOLATILE ANALYSIS WORKSHEET

Run Date: 08/21/2002

Time: 15:46

User Id.:

REVIEW DATE/BY: _____

CLIENT CODE: 378708
PROJECT MANAGER: John D. Powell
SITE: Waste Characterization
AMT. REC"D: 120G
SAMPLE ID: H-14
QC PACKAGE: Report
QC PROGRAM: STANDARD TEST SET
ANALYSIS CODE: XX-A-13-QJ-01 GC8081_S
SOLID, 8081A, Pesticides (Denver)
SAMPLE COMMENTS:

WORK ORDER: E6VCK-1-AA
QUOTE #: 43710
LAB NUMBER: F2H200218-002
STORAGE LOC: R158

SAMPLING DATE: 8/19/02
RECEIVING DATE: 8/20/02
QC BATCH: _____

ANALYTICAL DUE DATE: 8/27/02N

ANALYSIS COMMENTS:

* * * * * ANALYSIS/EXTRACTION DATA * * * * *

METHOD: SOLID, 8081A, Pesticides (Denver)

LIST: - 02227 Q: SW846 Method 8081A Standard List

MATRIX: SOLID

EXPIRATION: EXTR ANALYSIS
9/02/02 10/12/02

EXTRACTION: SONICATION - Low LevelANALYSIS: INSTRUMENT ID: _____

INITIAL: 0 CLEANUP: _____

RUN #: _____

FINAL: .00 SPIKE: _____

DATE: _____

SOLVENT: SURROGATE: _____

BY: _____

DATE/BY: 0/00/00 DRY WT: _____ %

(DL) FACTOR: _____

COMMENTS: CALIBRATION DATE: _____

* * * * *

UNITS: ug/kg

Dry Weighted

Aldrin	1.7
alpha-BHC.	1.7
beta-BHC	1.7
delta-BHC.	1.7
gamma-BHC (Lindane).	1.7
Chlordane (technical).	17
4,4'-DDD	1.7
4,4'-DDE	1.7
4,4'-DDT	1.7
Dieldrin	1.7
Endrin	1.7
Endrin aldehyde.	1.7
Endosulfan I	1.7
Endosulfan II.	1.7
Endosulfan sulfate	1.7
Heptachlor	1.7
Heptachlor epoxide	6.7
Methoxychlor	3.3
Toxaphene.	170

* SURROGATE RECOVERIES *

Decachlorobiphenyl	(050	- 151)	_____
Tetrachloro-m-xylene	(064	- 131)	_____

Chain of Custody Record

087L-4124 (0001)

Client

**Severn Trent Laboratories, Inc.**

STL ST. LOUIS

[illegible]

Comments

SEVERN

TRENT

SERVICES

Lot No.: F2H200218Condition Upon Receipt Form
St. Louis LaboratoryClient: STSDate: 08-20-02 Time: 1040Quote No: 43710Initiated by: J. KleszczewskiShipper/No: FedEx/831429584063COC/RFA Numbers: 147688

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}^*$ Record temperature: <u>2°C</u>	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
3. <input checked="" type="radio"/> Y <input type="radio"/> N N/A	Sample received with proper pH**.	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

No custody seals on containers.

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: IMV Lyu Date: 08-20-02Project Management Review: GRM Date: 08-21-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR
INITIALS AND THE DATE NEXT TO THAT ITEM

SW
16022769

SEVERN
TRENT
SERVICES

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

REVISED

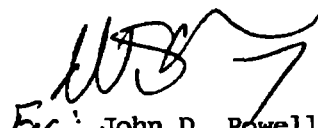
Waste Characterization

Lot #: F2H050168

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.


For: John D. Powell
Project Manager

August 16, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Case Narrative
LOT NUMBER: F2H050168

This report contains the analytical results for the three samples received under chain of custody by STL St. Louis on August 5, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Nonconformance 06-12377, 06-12378

Affected Samples:

F2H050168 (1): I-2

F2H050168 (2): I-4

F2H050168 (3): I-6

Affected Methods:

8081A Pesticides

Case Narrative:

These samples were analyzed at a dilution due to the presence of matrix interference. The reporting limit has been adjusted for the dilution. Also, a MS/MSD was not analyzed due to the interference that was present. Results are provided with this narrative.

METHODS SUMMARY

F2H050168

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H050168

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E5XM3	001	I-2	08/02/02	14:30
E5XM8	002	I-4	08/02/02	14:35
E5XNA	003	I-6	08/02/02	14:40

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, pour filter test, pH, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-2

GC Semivolatiles

Lot-Sample #....: F2H050168-001 Work Order #....: E5XM31AA Matrix.....: SOLID
Date Sampled....: 08/02/02 14:30 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/12/02
Prep Batch #....: 2220226 Analysis Time...: 15:57
Dilution Factor: 20
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	41	ug/kg
Heptachlor epoxide	ND	41	ug/kg
Aldrin	ND	41	ug/kg
Chlordane (technical)	ND	410	ug/kg
alpha-BHC	ND	41	ug/kg
gamma-BHC (Lindane)	ND	41	ug/kg
4,4'-DDT	ND	41	ug/kg
Dieldrin	ND	41	ug/kg

revised reporting limit to 20 ug/kg (see 10/14/02 report)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-2

General Chemistry

Lot-Sample #....: F2H050168-001 Work Order #....: E5XM3 Matrix.....: SOLID
Date Sampled....: 08/02/02 14:30 Date Received...: 08/03/02
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	16.8	0.10	%	NCANW 160.3 MOD	08/05-08/06/02	2217431

Dilution Factor: 1 Analysis Time...: 00:04

LOT# F2H050168

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-4

GC Semivolatiles

Lot-Sample #....: F2H050168-002 Work Order #....: E5XM81AA Matrix.....: SOLID
Date Sampled...: 08/02/02 14:35 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
Prep Batch #....: 2220226 Analysis Time...: 03:55
Dilution Factor: 20
% Moisture.....: 15 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	40	ug/kg
Heptachlor epoxide	ND	40	ug/kg
Aldrin	ND	40	ug/kg
Chlordane (technical)	ND	400	ug/kg
alpha-BHC	ND	40	ug/kg
gamma-BHC (Lindane)	ND	40	ug/kg
4,4'-DDT	ND	40	ug/kg
Dieldrin	ND	40	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-4

General Chemistry

Lot-Sample #....: F2H050168-002 Work Order #....: E5XM8 Matrix.....: SOLID
Date Sampled....: 08/02/02 14:35 Date Received...: 08/03/02
% Moisture.....: 15

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	15.3	0.10	%	MCANW 160.3 MOD	08/05-08/06/02	2217431
		Dilution Factor: 1		Analysis Time...: 00:04		

LOT# F2H050168

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-6

GC Semivolatiles

Lot-Sample #....: F2H050168-003 Work Order #....: E5XNA1AA Matrix.....: SOLID
Date Sampled...: 08/02/02 14:40 Date Received...: 08/03/02
Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
Prep Batch #....: 2220226 Analysis Time...: 04:14
Dilution Factor: 20
% Moisture.....: 18 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	49	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	42	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

*- revised rpt limit
to 2 ug/kg
(see 10/14/02 rpt)*

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: I-6

General Chemistry

Lot-Sample #....: F2H050168-003 Work Order #....: E5XNA Matrix.....: SOLID
Date Sampled....: 08/02/02 14:40 Date Received...: 08/03/02
% Moisture.....: 18

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	18.3	0.10	%	MCANW 160.3 MOD	08/05-08/06/02	2217431
		Dilution Factor: 1		Analysis Time...: 00:04		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H050168
MB Lot-Sample #: F2H080000-226

Work Order #....: E54F01AA

Matrix.....: SOLID

Analysis Date...: 08/10/02
Dilution Factor: 1

Prep Date.....: 08/08/02

Analysis Time...: 00:29

Prep Batch #....: 2220226

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Aldrin	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
		PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS		
Tetrachloro-m-xylene	88	(57 - 116)		
Decachlorobiphenyl	97	(45 - 147)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H050168 Work Order #....: E54F01AC Matrix.....: SOLID
 LCS Lot-Sample#: F2H080000-226
 Prep Date.....: 08/08/02 Analysis Date...: 08/10/02
 Prep Batch #....: 2220226 Analysis Time...: 00:47
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Heptachlor	95	(58 - 150)	SW846 8081A
Heptachlor epoxide	93	(62 - 150)	SW846 8081A
Aldrin	91	(57 - 150)	SW846 8081A
alpha-BHC	85	(56 - 150)	SW846 8081A
gamma-BHC (Lindane)	86	(59 - 150)	SW846 8081A
Endrin	97	(62 - 150)	SW846 8081A
4,4'-DDT	104	(66 - 150)	SW846 8081A
Dieldrin	93	(57 - 150)	SW846 8081A
beta-BHC	85	(53 - 150)	SW846 8081A
delta-BHC	56	(49 - 141)	SW846 8081A
alpha-Chlordane	94	(57 - 150)	SW846 8081A
gamma-Chlordane	95	(58 - 150)	SW846 8081A
4,4'-DDD	95	(60 - 149)	SW846 8081A
4,4'-DDE	96	(65 - 150)	SW846 8081A
Endosulfan I	93	(60 - 146)	SW846 8081A
Endosulfan II	93	(59 - 150)	SW846 8081A
Endosulfan sulfate	84	(59 - 148)	SW846 8081A
Endrin aldehyde	79	(43 - 150)	SW846 8081A
Endrin ketone	96	(61 - 150)	SW846 8081A
Methoxychlor	97	(62 - 150)	SW846 8081A
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Tetrachloro-m-xylene	100	(66 - 133)	
Decachlorobiphenyl	102	(59 - 146)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/05/02
Time: 14:48:00
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H050168-001
PROJECT #: WORK ORDER: E5XM3
REPORT TO: Rich Berggreen RECEIVING DATE: 8/03/02
P.O. NUMBER: SAMPLING DATE: 8/02/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/09/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/09/02
STORAGE LOC: R75 PRIORITY: 04
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 8:45
USAF MATRIX:
SAMPLE ID: I-2
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Pesticides (8081A)	06	8/05/02	8/16/02	9/25/02
--------------------	----	---------	---------	---------

SONICATION - Low Level

STL: Pesticides by 8081A

(A-13-QJ-01) E5XM3-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	06	8/05/02	0/00/00	11/09/02
---------------------------	----	---------	---------	----------

NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E5XM3-1-AC Protocol: A QC Program: STANDARD TEST SET

STL ST. LOUIS

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/05/02

Time: 14:48:00

User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
 PROJECT MANAGER: John D. Powell LAB ID: F-2H050168-002
 PROJECT #: WORK ORDER: E5XM8
 REPORT TO: Rich Berggreen RECEIVING DATE: 8/03/02
 P.C. NUMBER: SAMPLING DATE: 8/02/02
 SITE: Waste Characterization ANALYTICAL DUE DATE: 6/09/02N
 AMOUNT REC'D: 120G REPORT DUE DATE: 8/09/02
 STORAGE LOC: R75 PRIORITY: 04
 LOT COMMENTS: SAMPLING TIME: 14:35
 MATRIX: SOLID RECEIVING TIME: 8:45
 USAF MATRIX:
 SAMPLE ID: I-4
 QC PACKAGE: Report SDG# :
 SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	06	8/05/02	8/16/02	9/25/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5XM8-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	06	8/05/02	0/00/00	11/09/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5XM8-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1

SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. Louis

Run Date: 8/05/02
Time: 14:48:00
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD.
PROJECT MANAGER: John D. Powell
PROJECT #:
REPORT TO: Rich Berggreen
P.O. NUMBER:
SITE: Waste Characterization
AMOUNT REC"D: 120G
STORAGE LOC: R75
LOT COMMENTS:
MATRIX: SOLID
USAF MATRIX:
SAMPLE ID: I-6
QC PACKAGE: Report
SAMPLE COMMENTS:

QUOTE/SAR #: 43710
LAB ID: F-2H050168-003
WORK ORDER: E5XNA
RECEIVING DATE: 8/03/02
SAMPLING DATE: 8/02/02
ANALYTICAL DUE DATE: 8/09/02N
REPORT DUE DATE: 8/09/02
PRIORITY: 04
SAMPLING TIME: 14:40
RECEIVING TIME: 8:45

SDG# :

Beginning Depth: .00 Ending Depth: .00

	WRK	REQUEST	EXTRACTION	ANALYSIS
	LOC	DATE	EXP DATE	EXP DATE
***** ANALYSIS *****				
Pesticides (8081A)	06	8/05/02	8/16/02	9/25/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5XNA-1-AA Protocol: A	QC Program: STANDARD TEST SET			
Moisture, Percent (160.3)	06	8/05/02	0/00/00	11/09/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5XNA-1-AC Protocol: A	QC Program: STANDARD TEST SET			

CHAIN OF CUSTODY RECORD

No 39063



Contact Person RICH BAZZONI
 Phone No. (314) 278-2000 Office VERMILION HILLS
 Project No. 25585 XI PO No. _____
 Project Name CRAD 341 EAST OAK

Special Handling Request

- ☐ Rush
☐ Verbal
☐ Other

RECORD NUMBER _____ THROUGH _____

Laboratory SILVERN TRENT LABS
 Contact Person _____
 Phone No. _____
 Results Due 4 DAYS

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (water, soil, etc. design, etc.)	Preservation		Field Data				Analysis Request	Comments on Sample (Include Major Contaminants)	
							Y	N	Ambient	PORT		PH			Special Cond.
										Sample					
I-2	8/2/02	1430		K		Soil							Pesticides, Moisture	SW 846 8081	
I-4	1	1435												"	Pesticides
I-6		1440												"	ALDIN Alpha-BHC CHLORDANE, TECH Dieldrin, Heptachlor Heptachlor Epoxide Lindane 4,4' DDT

Collected by: <u>[Signature]</u>	Date: <u>8/12/02</u>	Time: <u>1625</u>	Delivery by:	Date:	Time:
Received by:	Date:	Time:	Relinquished by:	Date:	Time:
Received by:	Date:	Time:	Relinquished by:	Date:	Time:
Received by:	Date:	Time:	Relinquished by:	Date:	Time:
Received for lab by: <u>[Signature]</u>	Date: <u>8/3/02</u>	Time: <u>0845</u>	Relinquished by:	Date:	Time:

Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Yes ☐ No ☐ N/A

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):
	Please send container back to STS with 12 sample jars & 12 CFC's

Distribution: Original and Green - Laboratory Yellow - As needed Pink - Transporter Goldenrod - STS Project File
 Instructions to Laboratory: Forward completed original to STS with analytical results. Retain green copy.

Lot No.: F2H050168

Condition Upon Receipt Form
St. Louis Laboratory

Client: STS Consultants
Quote No: 47310 43710 SJ 8.5.02
Shipper/No: Fed Ex 834998434702

Date: 8-3-02 Time: 0845
Initiated by: JH
COC/RFA Numbers: 39063

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y	Sample received within 4°C ± 2°C*	6. <input checked="" type="radio"/> N	Sample received with Chain of Custody.
	Record temperature: <u>20</u>	7. <input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers.
3. <input checked="" type="radio"/> Y <input checked="" type="radio"/> N	Sample received with proper pH**.	8. <input checked="" type="radio"/> Y	Custody seal received intact and tamper evident on cooler.
4. <input checked="" type="radio"/> N	Sample received in proper containers.	9. <input checked="" type="radio"/> Y	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes: 8.9) No salt present

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature] Date: 8.3-02

Project Management Review: [Signature] Date: 08-05-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM



STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.st-inc.com

ANALYTICAL REPORT

REVISED

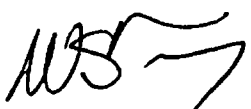
Waste Characterization

Lot #: F2H020131

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.


For: John D. Powell
Project Manager

August 16, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Case Narrative
LOT NUMBER: F2H020131

This report contains the analytical results for the two samples received under chain of custody by STL St. Louis on August 2, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Nonconformance 06-12359

Affected Samples:

F2H020131 (1): H-4

F2H020131 (2): H-8

Affected Methods:

8081A Pesticides

Case Narrative:

The MS recovery for delta-BHC, gamma-BHC, endrin, endosulfan sulfate and methoxychlor for sample F2H020307-001 (E5VN31AL) is outside the established lower QC limits. The MSD recovery for delta-BHC and methoxychlor for sample F2H020307-001 (E5VN31AM) is outside the established lower QC limits. The RPD is within method acceptance criteria indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. No further action is required. The data is reported with this narrative.

Nonconformance 06-12360

Affected Samples:

F2H020131 (1): H-4

F2H020131 (2): H-8

Affected Methods:

8081A Pesticides

Case Narrative:

These samples were analyzed at a dilution due to the presence of matrix interference. The reporting limit has been adjusted for the dilution. Results are provided with this narrative.

METHODS SUMMARY

F2H020131

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H020131

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E5R4G	001	H-4	08/01/02	13:30
E5R4J	002	H-8	08/01/02	13:40

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filler test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-4

GC Semivolatiles

Lot-Sample #....: F2H020131-001 Work Order #....: B5R4G1AA Matrix.....: SOLID
Date Sampled....: 08/01/02 13:30 Date Received...: 08/02/02
Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
Prep Batch #....: 2217113 Analysis Time...: 02:40
Dilution Factor: 20
% Moisture.....: 3.6 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Heptachlor	ND	35	ug/kg
Heptachlor epoxide	ND	35	ug/kg
Aldrin	ND	35	ug/kg
Chlordane (technical)	ND	350	ug/kg
alpha-BHC	ND	35	ug/kg
gamma-BHC (Lindane)	ND	35	ug/kg
4,4'-DDT	ND	35	ug/kg
Dieldrin	ND	35	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-4

General Chemistry

Lot-Sample #...: F2H020131-001 Work Order #...: E5R4G Matrix.....: SOLID
Date Sampled...: 08/01/02 13:30 Date Received..: 08/02/02
% Moisture.....: 3.6

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	3.6	0.10	%	MCANW 160.3 MOD	08/05-08/06/02	2217423

Dilution Factor: 1 Analysis Time...: 00:00

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-8

GC Semivolatiles

Lot-Sample #....: F2H020131-002 Work Order #....: E5R4J1AA Matrix.....: SOLID
Date Sampled....: 08/01/02 13:40 Date Received...: 08/02/02
Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
Prep Batch #....: 2217113 Analysis Time...: 02:59
Dilution Factor: 20
% Moisture.....: 3.5 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	35	ug/kg
Heptachlor epoxide	ND	35	ug/kg
Aldrin	ND	35	ug/kg
Chlordane (technical)	ND	350	ug/kg
alpha-BHC	ND	35	ug/kg
gamma-BHC (Lindane)	ND	35	ug/kg
4,4'-DDT	ND	35	ug/kg
Dieldrin	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-8

General Chemistry

Lot-Sample #....: F2H020131-002 Work Order #....: E5R4J Matrix.....: SOLID
Date Sampled....: 08/01/02 13:40 Date Received...: 08/02/02
% Moisture.....: 3.5

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	3.5	0.10	%	MCANW 160.3 MOD	08/05-08/06/02	2217423
		Dilution Factor: 1		Analysis Time...: 00:04		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #....: F2H020131 Work Order #....: E5WTL1AA Matrix.....: SOLID
MS Lot-Sample #: F2H050000-113 Prep Date.....: 08/05/02 Analysis Time...: 01:06
Analysis Date...: 08/10/02 Prep Batch #....: 2217113
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Aldrin	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Tetrachloro-m-xylene	60	(57 - 116)
Decachlorobiphenyl	79	(45 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H020131 Work Order #....: E5WTL1AC Matrix.....: SOLID
 LCS Lot-Sample#: F2H050000-113
 Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
 Prep Batch #....: 2217113 Analysis Time...: 01:25
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Heptachlor	83	(58 - 150)	SW846 8081A
Heptachlor epoxide	83	(62 - 150)	SW846 8081A
Aldrin	79	(57 - 150)	SW846 8081A
alpha-BHC	75	(56 - 150)	SW846 8081A
gamma-BHC (Lindane)	78	(59 - 150)	SW846 8081A
Endrin	86	(62 - 150)	SW846 8081A
4,4'-DDT	94	(66 - 150)	SW846 8081A
Dieldrin	84	(57 - 150)	SW846 8081A
beta-BHC	76	(53 - 150)	SW846 8081A
delta-BHC	52	(49 - 141)	SW846 8081A
alpha-Chlordane	82	(57 - 150)	SW846 8081A
gamma-Chlordane	83	(58 - 150)	SW846 8081A
4,4'-DDD	82	(60 - 149)	SW846 8081A
4,4'-DDE	84	(65 - 150)	SW846 8081A
Endosulfan I	81	(60 - 146)	SW846 8081A
Endosulfan II	82	(59 - 150)	SW846 8081A
Endosulfan sulfate	75	(59 - 148)	SW846 8081A
Endrin aldehyde	77	(43 - 150)	SW846 8081A
Endrin ketone	86	(61 - 150)	SW846 8081A
Methoxychlor	85	(62 - 150)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	73	(66 - 133)
Decachlorobiphenyl	78	(59 - 146)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H020131 Work Order #....: E5VN31AL-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H020307-001 E5VN31AM-MSD
 Date Sampled....: 08/01/02 Date Received...: 08/02/02
 Prep Date.....: 08/05/02 Analysis Date...: 08/10/02
 Prep Batch #....: 2217113 Analysis Time...: 02:02
 Dilution Factor: 1 % Moisture.....: 7.4

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Heptachlor	81	(52 - 150)			SW846 8081A
	85	(52 - 150)	5.1	(0-30)	SW846 8081A
Heptachlor epoxide	81	(73 - 124)			SW846 8081A
	85	(73 - 124)	5.8	(0-30)	SW846 8081A
Aldrin	77	(70 - 115)			SW846 8081A
	82	(70 - 115)	6.1	(0-30)	SW846 8081A
alpha-BHC	75	(72 - 115)			SW846 8081A
	79	(72 - 115)	6.2	(0-30)	SW846 8081A
gamma-BHC (Lindane)	78 a	(80 - 117)			SW846 8081A
	82	(80 - 117)	5.3	(0-30)	SW846 8081A
Endrin	84 a	(85 - 125)			SW846 8081A
	88	(85 - 125)	4.2	(0-30)	SW846 8081A
4,4'-DDT	92	(66 - 150)			SW846 8081A
	98	(66 - 150)	6.3	(0-30)	SW846 8081A
Dieldrin	83	(62 - 145)			SW846 8081A
	87	(62 - 145)	5.7	(0-30)	SW846 8081A
beta-BHC	75	(29 - 150)			SW846 8081A
	78	(29 - 150)	3.2	(0-30)	SW846 8081A
delta-BHC	51 a	(62 - 115)			SW846 8081A
	53 a	(62 - 115)	3.8	(0-30)	SW846 8081A
alpha-Chlordane	81	(10 - 150)			SW846 8081A
	84	(10 - 150)	4.4	(0-30)	SW846 8081A
gamma-Chlordane	81	(45 - 150)			SW846 8081A
	84	(45 - 150)	4.4	(0-30)	SW846 8081A
4,4'-DDD	81	(59 - 149)			SW846 8081A
	85	(59 - 149)	5.1	(0-30)	SW846 8081A
4,4'-DDE	83	(73 - 123)			SW846 8081A
	88	(73 - 123)	5.6	(0-30)	SW846 8081A
Endosulfan I	80	(73 - 118)			SW846 8081A
	84	(73 - 118)	5.1	(0-30)	SW846 8081A
Endosulfan II	79	(78 - 115)			SW846 8081A
	83	(78 - 115)	4.4	(0-30)	SW846 8081A
Endosulfan sulfate	72 a	(75 - 115)			SW846 8081A
	76	(75 - 115)	4.9	(0-30)	SW846 8081A
Endrin aldehyde	70	(40 - 132)			SW846 8081A
	74	(40 - 132)	5.0	(0-30)	SW846 8081A
Endrin ketone	83	(70 - 139)			SW846 8081A
	87	(70 - 139)	5.7	(0-30)	SW846 8081A
Methoxychlor	79 a	(85 - 145)			SW846 8081A
	82 a	(85 - 145)	4.5	(0-30)	SW846 8081A

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: F2H020131 Work Order #...: E5VN31AL-MS Matrix.....: SOLID
MS Lot-Sample #: F2H020307-001 E5VN31AM-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	72	(57 - 116)
	77	(57 - 116)
Decachlorobiphenyl	84	(45 - 147)
	93	(45 - 147)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/02/02

Time: 9:21:30

User Id.: WILSONS

CLIENT: 378703 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H020131-001
PROJECT #: WORK ORDER: ESR4G
REPORT TO: Rich Berggreen RECEIVING DATE: 8/02/02
P.O. NUMBER: SAMPLING DATE: 8/01/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/09/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/09/02
STORAGE LOC: R60 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:30
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: H-4
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Pesticides (8081A)	06	8/02/02	8/15/02	9/24/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) ESR4G-1-AA Protocol: A				
QC Program: STANDARD TEST SET				

STL ST. LOUIS

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/02/02
Time: 9:21:30
User Id.: WILSONS

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H020131-002
PROJECT #: WORK ORDER: E5R4J
REPORT TO: Rich Berggreen RECEIVING DATE: 8/02/02
P.O. NUMBER: SAMPLING DATE: 8/01/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/09/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/09/02
STORAGE LOC: R60 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 13:40
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: H-8
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
06	8/02/02	8/15/02	9/24/02

Pesticides (8081A)

SONICATION - Low Level

STL: Pesticides by 8081A

(A-13-QJ-01) E5R4J-1-AA Protocol: A QC Program: STANDARD TEST SET

Chain of Custody Record

**Severn Trent Laboratories, Inc.**

81L 4124 (0801)

Client SIS		Project Manager Rick BERGHEAN		Date 8/1/02		Chain of Custody Number 115329	
Address 750 CARPORT WALK PKWY		Telephone Number (Area Code)/Fax Number (847) 279-2600		Lab Number		Page _____ of _____	
City VERNA HILLS		State IL		Zip Code 60061		Site Contact Dumas	
Project Name and Location (State) GMD		Carrier/Waybill Number		Lab Contact		Analysis (Attach list if more space is needed)	
Contract/Purchase Order/Quote No. 25585-4B		Matrix		Containers & Preservatives		Special Instructions/ Conditions of Receipt	
Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date		Time			
H-4		8/1/02		1330		120G	
H-8		8/1/02		1340		120G	
Possible Hazard Identification		Sample Disposal		(A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Turn Around Time Required		QC Requirements (Specify)					
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input checked="" type="checkbox"/> Other 4 DAYS							
1. Relinquished By Eric Zauscher		Date 8/1/02		Time 1605		1. Received By J. Watson	
2. Relinquished By		Date		Time		2. Received By	
3. Relinquished By		Date		Time		3. Received By	
Comments							

DISTRIBUTION

HITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

SEVERN TRENT SERVICES

Lot No.: F2H020131

Condition Upon Receipt Form, St. Louis Laboratory

Client: STS consultants 43710 SN Date: 8-2-02 Time: 9:15
 Quote No: 12316622-378202 8.2.02 Initiated by: gwl
 Shipper/No: Fedx 834998434674 COC/RFA Numbers: 115329

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> N	Sample volume sufficient for analysis.
2. Y <input checked="" type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Record temperature: <u>19</u>	6. <input checked="" type="radio"/> Y <input checked="" type="radio"/> N	Sample received with Chain of Custody.
3. Y <input checked="" type="radio"/> N/A	Sample received with proper pH**.	7. <input checked="" type="radio"/> Y <input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> Y <input checked="" type="radio"/> N	Sample received in proper containers.	8. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature] Date: 8-2-02

Project Management Review: [Signature] Date: 8-03-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED

IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM

SEVERN

TRENT

SERVICES

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

REVISED

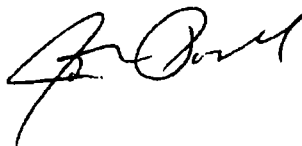
Waste Characterization

Lot #: F2H200218

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.



John D. Powell
Project Manager

September 3, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

Revised Case Narrative
LOT NUMBER: F2H200218

This report contains the analytical results for the two samples received under chain of custody by STL St. Louis on August 20, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

This report has been revised to report only the pesticides of interest.

Affected Samples:
F2H200218 (1): H-6

Affected Methods:
8081A

Case Narrative:
The reporting limit for sample(s) F2H200218-1 and F2H210313-2, 3, 4, 5 is elevated due to the presence of interfering, non-target, compounds. The associated sample extracts were yellow to brown in color. Matrix interferences (large peaks) are observed in the sample chromatograms.

METHODS SUMMARY

F2H200218

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H200218

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
E6VCA	001	H-6		08/19/02	14:00
E6VCK	002	H-14		08/19/02	14:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, pour filter test, pH, permeability pressure, reactivity, sediment potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6

GC Semivolatiles

Lot-Sample #....: F2H200218-001 Work Order #....: E6VCA1AA Matrix.....: SOLID
Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
Prep Batch #....: 2234216 Analysis Time...: 17:16
Dilution Factor: 50
% Moisture.....: 9.6 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	49	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Chlordane (technical)	13000	19	ug/kg
4,4'-DDT	29	1.9	ug/kg
Dieldrin	51	1.9	ug/kg
Heptachlor	1400	1.9	ug/kg
Heptachlor epoxide	ND	7.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 DIL,NC	(50 - 151)
Tetrachloro-m-xylene	0.0 DIL,NC	(64 - 131)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

NC The recovery and/or RPD were not calculated.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: H-6

General Chemistry

Lot-Sample #....: F2H200218-001 Work Order #....: E6VCA Matrix.....: SOLID
Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
% Moisture.....: 9.6

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	9.6	0.10	%	MCAHW 160.3 MOD	08/26/02	2238529
		Dilution Factor: 1		Analysis Time...: 19:30		

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-14

GC Semivolatiles

Lot-Sample #....: F2H200218-002 Work Order #....: E6VCK1AA Matrix.....: SOLID
Date Sampled....: 08/19/02 14:30 Date Received...: 08/20/02
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 16:46
Dilution Factor: 1
% Moisture.....: 5.4 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	1.8	ug/kg
alpha-BHC	ND	1.8	ug/kg
gamma-BHC (Lindane)	ND	1.8	ug/kg
Chlordane (technical)	ND	18	ug/kg
4,4'-DDT	ND	1.8	ug/kg
Dieldrin	ND	1.8	ug/kg
Heptachlor	ND	1.8	ug/kg
Heptachlor epoxide	0.70 J,COL	7.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(50 - 151)
Tetrachloro-m-xylene	88	(64 - 131)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

COL More than 40% difference between primary and confirmation column results. The lower of the two results is reported.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-14

General Chemistry

Lot-Sample #....: F2H200218-002 Work Order #....: E6VCK Matrix.....: SOLID
Date Sampled....: 08/19/02 14:30 Date Received...: 08/20/02
% Moisture.....: 5.4

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	5.4	0.10	%	MCANW 160.3 MOD	08/26/02	2238529
		Dilution Factor: 1		Analysis Time...: 19:30		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F2H200218
MB Lot-Sample #: D2H220000-216

Work Order #...: E61LW1AA

Matrix.....: SOLID

Analysis Date...: 08/26/02

Prep Date.....: 08/22/02

Analysis Time...: 17:16

Dilution Factor: 1

Prep Batch #...: 2234216

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	6.7	ug/kg	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	99	(50 - 151)
Tetrachloro-m-xylene	100	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H200218 Work Order #....: E61LW1AC Matrix.....: SOLID
LCS Lot-Sample#: D2H220000-216
Prep Date.....: 08/22/02 Analysis Date...: 08/26/02
Prep Batch #....: 2234216 Analysis Time...: 14:49
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aldrin	93	(72 - 129)	SW846 8081A
gamma-BHC (Lindane)	92	(69 - 131)	SW846 8081A
Endrin	96	(70 - 137)	SW846 8081A
4,4'-DDT	87	(65 - 150)	SW846 8081A
Dieldrin	92	(73 - 133)	SW846 8081A
Heptachlor	98	(63 - 146)	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	94	(50 - 151)
Tetrachloro-m-xylene	102	(64 - 131)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H200218 Work Order #....: E6VCA1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H200218-001 E6VCA1AE-MSD
 Date Sampled....: 08/19/02 14:00 Date Received...: 08/20/02
 Prep Date.....: 08/22/02 Analysis Date...: 08/27/02
 Prep Batch #....: 2234216 Analysis Time...: 17:45
 Dilution Factor: 50 % Moisture.....: 9.6

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	NC,DIL	(72 - 129)			SW846 8081A
	NC,DIL	(72 - 129)		(0-30)	SW846 8081A
gamma-BHC (Lindane)	NC,DIL	(69 - 131)			SW846 8081A
	NC,DIL	(69 - 131)		(0-30)	SW846 8081A
Endrin	NC,DIL	(70 - 137)			SW846 8081A
	NC,DIL	(70 - 137)		(0-30)	SW846 8081A
4,4'-DDT	NC,DIL	(65 - 150)			SW846 8081A
	NC,DIL	(65 - 150)		(0-30)	SW846 8081A
Dieldrin	NC,DIL	(73 - 133)			SW846 8081A
	NC,DIL	(73 - 133)		(0-30)	SW846 8081A
Heptachlor	NC,DIL	(63 - 146)			SW846 8081A
	NC,DIL	(63 - 146)		(0-30)	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0	(50 - 151)
	Qualifiers: DIL,NC	
	0.0	(50 - 151)
	Qualifiers: DIL,NC	
Tetrachloro-m-xylene	0.0	(64 - 131)
	Qualifiers: DIL,NC	
	0.0	(64 - 131)
	Qualifiers: DIL,NC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/21/02

Time: 15:46:27

User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H200218-001
PROJECT #: WORK ORDER: E6VCA
REPORT TO: Rich Berggreen RECEIVING DATE: 8/20/02
P.O. NUMBER: SAMPLING DATE: 8/19/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/27/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/27/02
STORAGE LOC: R158 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:00
MATRIX: SOLID RECEIVING TIME: 8:00
USAF MATRIX:
SAMPLE ID: H-6
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	<u>WRK</u>	<u>REQUEST</u>	<u>EXTRACTION</u>	<u>ANALYSIS</u>
	<u>LOC</u>	<u>DATE</u>	<u>EXP DATE</u>	<u>EXP DATE</u>
Pesticides (8081A)	04	8/21/02	9/02/02	10/12/02
SONICATION - Low Level				
Q: SW846 Method 8081A Standard List				
(A-13-QJ-01) E6VCA-1-AA Protocol: A				
QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	04	8/21/02	0/00/00	11/26/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-MM-01) E6VCA-1-AC Protocol: A				
QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/21/02
Time: 15:46:27
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H200218-002
PROJECT #: WORK ORDER: E6VCK
REPORT TO: Rich Berggreen RECEIVING DATE: 8/20/02
P.O. NUMBER: SAMPLING DATE: 8/19/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/27/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/27/02
STORAGE LOC: R158 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 8:00
USAF MATRIX:
SAMPLE ID: H-14
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE
04	8/21/02	9/02/02	10/12/02

Pesticides (8081A)

SONICATION - Low Level

Q: SW846 Method 8081A Standard List

(A-13-QJ-01) E6VCK-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)

04	8/21/02	0/00/00	11/26/02
----	---------	---------	----------

NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E6VCK-1-AC Protocol: A QC Program: STANDARD TEST SET

PSL233

STL Denver
GC SEMI-VOLATILE ANALYSIS WORKSHEET

Run Date: 08/21/2002

Time: 15:46

User Id.:

REVIEW DATE/BY: _____

WORK ORDER: E6VCA-1-AA

QUOTE #: 43710

LAB NUMBER: F2H200218-001

STORAGE LOC: R158

CLIENT CODE: 378708
PROJECT MANAGER: John D. Powell
SITE: Waste Characterization
AMT. REC'D: 120G
SAMPLE ID: H-6
QC PACKAGE: Report
QC PROGRAM: STANDARD TEST SET
ANALYSIS CODE: XX-A-13-QJ-01 GC8081_S
SOLID, 8081A, Pesticides (Denver)
SAMPLE COMMENTS:

SAMPLING DATE: 8/19/02

RECEIVING DATE: 8/20/02

QC BATCH: _____

ANALYTICAL DUE DATE: 8/27/02N

ANALYSIS COMMENTS:

***** ANALYSIS/EXTRACTION DATA *****

METHOD: SOLID, 8081A, Pesticides (Denver)

LIST: - 02227 Q: SW846 Method 8081A Standard List

MATRIX: SOLID

EXPIRATION: EXTR ANALYSIS

EXTRACTION: SONICATION - Low Level

9/02/02 10/12/02

INITIAL: 0 CLEANUP: _____
FINAL: .00 SPIKE: _____
SOLVENT: SURROGATE: _____
DATE/BY: 0/00/00 DRY WT: _____
COMMENTS:

ANALYSIS: INSTRUMENT ID: _____

RUN #: _____

DATE: _____

BY: _____

(DL) FACTOR: _____

CALIBRATION DATE: _____

UNITS: ug/kg

Dry Weighted

Endosulfan I	1.7
Endosulfan II.	1.7
Endosulfan sulfate	1.7
Heptachlor	1.7
Heptachlor epoxide	6.7
Methoxychlor	3.3
Toxaphene.	170
Aldrin	1.7
alpha-BHC.	1.7
beta-BHC	1.7
delta-BHC.	1.7
gamma-BHC (Lindane).	1.7
Chlordane (technical).	17
4,4'-DDD	1.7
4,4'-DDE	1.7
4,4'-DDT	1.7
Dieldrin	1.7
Endrin	1.7
Endrin aldehyde.	1.7

* SURROGATE RECOVERIES *

Decachlorobiphenyl	(050	- 151)	_____
Tetrachloro-m-xylene	(064	- 131)	_____

PSL233

Severn Trent Laboratories, Inc
GC SEMI-VOLATILE ANALYSIS WORKSHEET

Run Date: 08/21/2002

Time: 15:46

User Id.:

REVIEW DATE/BY: _____

CLIENT CODE: 378708
PROJECT MANAGER: John D. Powell
SITE: Waste Characterization
AMT. REC"D: 120G
SAMPLE ID: H-14
QC PACKAGE: Report
QC PROGRAM: STANDARD TEST SET
ANALYSIS CODE: XX-A-13-QJ-01 GC8081_S
SOLID, 8081A, Pesticides (Denver)
SAMPLE COMMENTS:

WORK ORDER: E6VCK-1-AA
QUOTE #: 43710
LAB NUMBER: F2H200218-002
STORAGE LOC: R158

SAMPLING DATE: 8/19/02
RECEIVING DATE: 8/20/02
QC BATCH: _____

ANALYTICAL DUE DATE: 8/27/02N

ANALYSIS COMMENTS:

***** ANALYSIS/EXTRACTION DATA *****

METHOD: SOLID, 8081A, Pesticides (Denver)

LIST: - 02227 Q: SW846 Method 8081A Standard List

MATRIX: SOLID

EXTRACTION: SONICATION - Low Level

EXPIRATION: EXTR ANALYSIS
9/02/02 10/12/02

INITIAL: 0 CLEANUP: _____
FINAL: .00 SPIKE: _____
SOLVENT: SURROGATE: _____
DATE/BY: 0/00/00 DRY WT: _____ %

ANALYSIS: INSTRUMENT ID: _____
RUN #: _____
DATE: _____
BY: _____
(DL) FACTOR: _____
CALIBRATION DATE: _____

COMMENTS:

UNITS: ug/kg

Dry Weighted

Aldrin	1.7
alpha-BHC	1.7
beta-BHC	1.7
delta-BHC	1.7
gamma-BHC (Lindane)	1.7
Chlordane (technical)	17
4,4'-DDD	1.7
4,4'-DDE	1.7
4,4'-DDT	1.7
Dieldrin	1.7
Endrin	1.7
Endrin aldehyde	1.7
Endosulfan I	1.7
Endosulfan II	1.7
Endosulfan sulfate	1.7
Heptachlor	1.7
Heptachlor epoxide	6.7
Methoxychlor	3.3
Toxaphene	170

* SURROGATE RECOVERIES *

Decachlorobiphenyl	(050	- 151)	_____
Tetrachloro-m-xylene	(064	- 131)	_____

Chain of Custody Record

STL-4124 (0501)



Severn Trent Laboratories, Inc.

Client SIS		Project Manager		Date 8/19/02	Chain of Custody Number 147688
Address 700 CANTONMENT WOODS PKWY		Telephone Number (Area Code)/Fax Number (847) 279-2520		Lab Number	Page _____ of _____

City VERONA HILLS	State IL	Zip Code 60061	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)
Project Name and Location (State) GMO			Carrier/Waybill Number		

Contract/Purchase Order/Quote No. 25585-XG			Matrix				Containers & Preservatives										Special Instructions/ Conditions of Receipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	1	2	3	4	5	6	7	8	9	10	11	12			
227 H-6	8/19/02	1400															
227 H-14	8/19/02	1400															

Possible Hazard Identification			Sample Disposal			(A fee may be assessed if samples are retained longer than 1 month)		
<input type="checkbox"/> Non Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For _____ Months	
Turn Around Time Required			QC Requirements (Specify)					
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other _____			
1. Relinquished By [Signature]			Date 8/19/02			Time 1723		
2. Relinquished By			Date			Time		
3. Relinquished By			Date			Time		

1. Received By [Signature]		Date 08-20-02	Time 0800
2. Received By		Date	Time
3. Received By		Date	Time

Comments

SEVERN

TRENT

SERVICES

Lot No.: F2H200218Condition Upon Receipt Form
St. Louis LaboratoryClient: STSDate: 08-20-02 Time: 1040Quote No: 43710Initiated by: J. KleszczewskiShipper/No: FedEx/831429584063COC/RFA Numbers: 147688

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}^*$ Record temperature: <u>2°C</u>	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
3. <input checked="" type="radio"/> Y <input type="radio"/> N N/A	Sample received with proper pH**.	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. <input checked="" type="radio"/> Y <input type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

No custody seals on containers.

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: Im Vlyw Date: 08-20-02Project Management Review: PCM Date: 08-21-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR
INITIALS AND THE DATE NEXT TO THAT ITEM

Inv
16022766



STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.st-inc.com

ANALYTICAL REPORT

REVISED

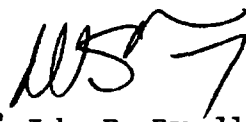
Waste Characterization

Lot #: F2H010233

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.


For: John D. Powell
Project Manager

August 16, 2002

Case Narrative
LOT NUMBER: F2H010233

This report contains the analytical results for the four samples received under chain of custody by STL St. Louis on August 1, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2H010233 (1): F-8
F2H010233 (2): H-6

F2H010233 (3): H-10
F2H010233 (4): H-12

Affected Methods:
8081A

Case Narrative:

The MS recovery for delta-BHC for sample F2H010156-002 (E5P0P1AK) is outside the established lower QC limits. The RPD is within method acceptance criteria indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. Results are provided with this narrative.

The samples were analyzed at a dilution due to the presence of matrix interferences. The reporting limit has been adjusted for the dilution.

METHODS SUMMARY

F2H010233

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H010233

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E5QGC	001	F-8	07/31/02	08:30
E5QGG	002	H-6	07/31/02	08:45
E5QGH	003	H-10	07/31/02	09:15
E5QGJ	004	H-12	07/31/02	09:45

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, permeability pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-8

GC Semivolatiles

Lot-Sample #....: F2H010233-001 Work Order #....: E5QGCLAA Matrix.....: SOLID
Date Sampled....: 07/31/02 08:30 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 02:28
Dilution Factor: 20
% Moisture.....: 5.2 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	36	ug/kg
Heptachlor epoxide	ND	36	ug/kg
Aldrin	ND	36	ug/kg
Chlordane (technical)	ND	360	ug/kg
alpha-BHC	ND	36	ug/kg
gamma-BHC (Lindane)	ND	36	ug/kg
4,4'-DDT	ND	36	ug/kg
Dieldrin	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F-8

General Chemistry

Lot-Sample #: F2H010233-001 Work Order #: E5QGC Matrix: SOLID
Date Sampled: 07/31/02 08:30 Date Received: 08/01/02
% Moisture: 5.2

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	5.2	0.10	%	MCANW 160.3 MOD	08/02-08/05/02	2214392
		Dilution Factor: 1		Analysis Time: 00:04		

LOT# F2H010233

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6

GC Semivolatiles

Lot-Sample #....: F2H010233-002 Work Order #....: E5QGG1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 08:45 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 02:47
Dilution Factor: 20
% Moisture.....: 13 Method.....: SW846 8081A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Heptachlor	360	39	ug/kg
Heptachlor epoxide	ND	39	ug/kg
Aldrin	ND	39	ug/kg
Chlordane (technical)	ND	390	ug/kg
alpha-BHC	ND	39	ug/kg
gamma-BHC (Lindane)	ND	39	ug/kg
4,4'-DDT	ND	39	ug/kg
Dieldrin	ND	39	ug/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-6

General Chemistry

Lot-Sample #....: F2H010233-002 Work Order #....: E5QGG Matrix.....: SOLID
Date Sampled....: 07/31/02 08:45 Date Received...: 08/01/02
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	12.6	0.10	%	MCAMW 160.3 MOD	08/02-08/05/02	2214392
		Dilution Factor: 1		Analysis Time...: 00:04		

LOT# F2H010233

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-10

GC Semivolatiles

Lot-Sample #....: F2H010233-003 Work Order #....: E5QGH1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 09:15 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 03:06
Dilution Factor: 20
% Moisture.....: 19 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	42	ug/kg
Heptachlor epoxide	ND	42	ug/kg
Aldrin	ND	42	ug/kg
Chlordane (technical)	ND	420	ug/kg
alpha-BHC	ND	42	ug/kg
gamma-BHC (Lindane)	ND	42	ug/kg
4,4'-DDT	ND	42	ug/kg
Dieldrin	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

*revised reporting
limit to 21 ug/kg
(see 10/14/02 rpt)*

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-10

General Chemistry

Lot-Sample #....: F2H010233-003 Work Order #....: E5QGH Matrix.....: SOLID
Date Sampled....: 07/31/02 09:15 Date Received...: 08/01/02
% Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	19.1	0.10	%	MCANW 160.3 MOD	08/02-08/05/02	2214392
Dilution Factor: 1				Analysis Time...: 00:04		

LOT# F2H010233

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-12

GC Semivolatiles

Lot-Sample #....: F2H010233-004 Work Order #....: E5QGJ1AA Matrix.....: SOLID
Date Sampled....: 07/31/02 09:45 Date Received...: 08/01/02
Prep Date.....: 08/02/02 Analysis Date...: 08/08/02
Prep Batch #....: 2214119 Analysis Time...: 03:25
Dilution Factor: 20
% Moisture.....: 12 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	39	ug/kg
Heptachlor epoxide	ND	39	ug/kg
Aldrin	ND	39	ug/kg
Chlordane (technical)	ND	390	ug/kg
alpha-BHC	ND	39	ug/kg
gamma-BHC (Lindane)	ND	39	ug/kg
4,4'-DDT	ND	39	ug/kg
Dieldrin	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-12

General Chemistry

Lot-Sample #....: F2H010233-004 Work Order #....: E5QGJ Matrix.....: SOLID
Date Sampled....: 07/31/02 09:45 Date Received...: 08/01/02
% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.7	0.10	%	NCANW 160.3 MOD	08/02-08/05/02	2214392
		Dilution Factor: 1		Analysis Time... 00:04		

LOT# F2H010233

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F2H010233
MB Lot-Sample #: F2H020000-119

Work Order #...: E5RQ21AA

Matrix.....: SOLID

Analysis Date...: 08/07/02
Dilution Factor: 1

Prep Date.....: 08/02/02

Analysis Time...: 18:42

Prep Batch #...: 2214119

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Aldrin	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Tetrachloro-m-xylene	79	(57 - 116)
Decachlorobiphenyl	94	(45 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H010233 Work Order #....: E5RQ21AC Matrix.....: SOLID
 LCS Lot-Sample#: F2H020000-119
 Prep Date.....: 08/02/02 Analysis Date...: 08/07/02
 Prep Batch #....: 2214119 Analysis Time...: 19:01
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Heptachlor	119	(58 - 150)	SW846 8081A
Heptachlor epoxide	119	(62 - 150)	SW846 8081A
Aldrin	112	(57 - 150)	SW846 8081A
alpha-BHC	109	(56 - 150)	SW846 8081A
gamma-BHC (Lindane)	115	(59 - 150)	SW846 8081A
Endrin	134	(62 - 150)	SW846 8081A
4,4'-DDT	147	(66 - 150)	SW846 8081A
Dieldrin	122	(57 - 150)	SW846 8081A
beta-BHC	113	(53 - 150)	SW846 8081A
delta-BHC	79	(49 - 141)	SW846 8081A
alpha-Chlordane	121	(57 - 150)	SW846 8081A
gamma-Chlordane	119	(58 - 150)	SW846 8081A
4,4'-DDD	126	(60 - 149)	SW846 8081A
4,4'-DDE	118	(65 - 150)	SW846 8081A
Endosulfan I	121	(60 - 146)	SW846 8081A
Endosulfan II	122	(59 - 150)	SW846 8081A
Endosulfan sulfate	111	(59 - 148)	SW846 8081A
Endrin aldehyde	109	(43 - 150)	SW846 8081A
Endrin ketone	127	(61 - 150)	SW846 8081A
Methoxychlor	135	(62 - 150)	SW846 8081A
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Tetrachloro-m-xylene	102	(66 - 133)	
Decachlorobiphenyl	125	(59 - 146)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H010233 Work Order #....: E5P0P1AK-MS Matrix.....: SOLID
 MS Lot-Sample #: F2H010156-002 E5P0P1AL-MSD
 Date Sampled....: 07/26/02 Date Received...: 07/31/02
 Prep Date.....: 08/02/02 Analysis Date...: 08/07/02
 Prep Batch #....: 2214119 Analysis Time...: 19:38
 Dilution Factor: 1 % Moisture.....: 6.6

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Heptachlor	92	(52 - 150)			SW846 8081A
	103	(52 - 150)	11	(0-30)	SW846 8081A
Heptachlor epoxide	90	(73 - 124)			SW846 8081A
	103	(73 - 124)	12	(0-30)	SW846 8081A
Aldrin	86	(70 - 115)			SW846 8081A
	97	(70 - 115)	12	(0-30)	SW846 8081A
alpha-BHC	80	(72 - 115)			SW846 8081A
	92	(72 - 115)	13	(0-30)	SW846 8081A
gamma-BHC (Lindane)	86	(80 - 117)			SW846 8081A
	98	(80 - 117)	12	(0-30)	SW846 8081A
Endrin	101	(85 - 125)			SW846 8081A
	117	(85 - 125)	14	(0-30)	SW846 8081A
4,4'-DDT	109	(66 - 150)			SW846 8081A
	126	(66 - 150)	14	(0-30)	SW846 8081A
Dieldrin	92	(62 - 145)			SW846 8081A
	105	(62 - 145)	13	(0-30)	SW846 8081A
beta-BHC	89	(29 - 150)			SW846 8081A
	101	(29 - 150)	13	(0-30)	SW846 8081A
delta-BHC	57 a	(62 - 115)			SW846 8081A
	66	(62 - 115)	14	(0-30)	SW846 8081A
alpha-Chlordane	90	(10 - 150)			SW846 8081A
	104	(10 - 150)	14	(0-30)	SW846 8081A
gamma-Chlordane	90	(45 - 150)			SW846 8081A
	103	(45 - 150)	13	(0-30)	SW846 8081A
4,4'-DDD	93	(59 - 149)			SW846 8081A
	105	(59 - 149)	12	(0-30)	SW846 8081A
4,4'-DDE	93	(73 - 123)			SW846 8081A
	108	(73 - 123)	14	(0-30)	SW846 8081A
Endosulfan I	89	(73 - 118)			SW846 8081A
	103	(73 - 118)	14	(0-30)	SW846 8081A
Endosulfan II	92	(78 - 115)			SW846 8081A
	106	(78 - 115)	13	(0-30)	SW846 8081A
Endosulfan sulfate	84	(75 - 115)			SW846 8081A
	95	(75 - 115)	12	(0-30)	SW846 8081A
Endrin aldehyde	83	(40 - 132)			SW846 8081A
	92	(40 - 132)	10	(0-30)	SW846 8081A
Endrin ketone	95	(70 - 139)			SW846 8081A
	108	(70 - 139)	12	(0-30)	SW846 8081A
Methoxychlor	101	(85 - 145)			SW846 8081A
	117	(85 - 145)	14	(0-30)	SW846 8081A

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2H010233 Work Order #....: E5P0P1AK-MS Matrix.....: SOLID
MS Lot-Sample #: F2H010156-002 E5P0P1AL-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	83	(57 - 116)
	90	(57 - 116)
Decachlorobiphenyl	96	(45 - 147)
	107	(45 - 147)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters.

Results and reporting limits have been adjusted for dry weight.

a. Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F2H010233

Work Order #....: E5RE9-SMP
E5RE9-DUP

Matrix.....: SOLID

Date Sampled....: 07/26/02

Date Received...: 07/31/02

% Moisture.....: 7.7

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Moisture						SD Lot-Sample #: F2H010348-013		
7.7		7.7	%	0.0	(0-30)	MCAWW 160.3 MOD	08/02-08/05/02	2214392

Dilution Factor: 1 Analysis Time...: 00:04

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC.
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 8/02/02
Time: 6:38:28
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H010233-001
PROJECT #: WORK ORDER: E5QGC
REPORT TO: Rich Berggreen RECEIVING DATE: 8/01/02
P.O. NUMBER: SAMPLING DATE: 7/31/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/06/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/06/02
STORAGE LOC: R47 PRIORITY: 05
LOT COMMENTS: SAMPLING TIME: 8:30
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: F-8
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	<u>WRK</u> <u>LOC</u>	<u>REQUEST</u> <u>DATE</u>	<u>EXTRACTION</u> <u>EXP DATE</u>	<u>ANALYSIS</u> <u>EXP DATE</u>
Moisture, Percent (160.3)	06	8/02/02	0/00/00	11/07/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5QGC-1-AC Protocol: A		QC Program: STANDARD TEST SET		
Pesticides (8081A)	06	8/01/02	8/14/02	9/11/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5QGC-1-AA Protocol: A		QC Program: STANDARD TEST SET		

PSL20300
Page 1

SEVERN TRENT LABORATORIES, INC.
CLIENT ANALYSIS SUMMARY
STL St. Louis

Run Date: 8/02/02
Time: 6:38:29
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H010233-002
PROJECT #: WORK ORDER: E5QGG
REPORT TO: Rich Berggreen RECEIVING DATE: 8/01/02
P.O. NUMBER: SAMPLING DATE: 7/31/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/06/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/06/02
STORAGE LOC: R47 PRIORITY: 05
LOT COMMENTS: SAMPLING TIME: 8:45
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: H-6
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Moisture, Percent (160.3)	06	8/02/02	0/00/00	11/07/02
---------------------------	----	---------	---------	----------

NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E5QGG-1-AC Protocol: A QC Program: STANDARD TEST SET

Pesticides (8081A)	06	8/01/02	8/14/02	9/11/02
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SONICATION - Low Level

STL: Pesticides by 8081A

(A-13-QJ-01) E5QGG-1-AA Protocol: A QC Program: STANDARD TEST SET

STL ST. LOUIS

PSL20300

Page 1

SEVERN TRENT LABORATORIES, INC.

CLIENT ANALYSIS SUMMARY

STL St. Louis

Run Date: 8/02/02

Time: 6:38:29

User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H010233-003
PROJECT #: WORK ORDER: E5QGH
REPORT TO: Rich Berggreen RECEIVING DATE: 8/01/02
P.O. NUMBER: SAMPLING DATE: 7/31/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/06/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/06/02
STORAGE LOC: R47 PRIORITY: 05
LOT COMMENTS: SAMPLING TIME: 9:15
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: H-10
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	8/02/02	0/00/00	11/07/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5QGH-1-AC Protocol: A QC Program: STANDARD TEST SET				
Pesticides (8081A)	06	8/01/02	8/14/02	9/11/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5QGH-1-AA Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1

SEVERN TRENT LABORATORIES, INC.
CLIENT ANALYSIS SUMMARY
STL St. Louis

Run Date: 8/02/02
Time: 6:38:29
User Id.: POWELLJ

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2H010233-004
PROJECT #: WORK ORDER: E5QGJ
REPORT TO: Rich Berggreen RECEIVING DATE: 8/01/02
P.O. NUMBER: SAMPLING DATE: 7/31/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/06/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/06/02
STORAGE LOC: R47 PRIORITY: 05
LOT COMMENTS: SAMPLING TIME: 9:45
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: H-12
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****	WRK	REQUEST	EXTRACTION	ANALYSIS
	LOC	DATE	EXP DATE	EXP DATE
Moisture, Percent (160.3)	06	8/02/02	0/00/00	11/07/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5QGJ-1-AC Protocol: A QC Program: STANDARD TEST SET				
Pesticides (8081A)	06	8/01/02	8/14/02	9/11/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5QGJ-1-AA Protocol: A QC Program: STANDARD TEST SET				

Chain of Custody Record



Severn Trent Laboratories, Inc.

NTL 4124 (0901)

Client STS		Project Manager RICH BURGESS		Date 7/31/02		Chain of Custody Number 115328			
Address 750 Corporate Woods Parkway		Telephone Number (Area Code) x Number (847) 279-2500		Lab Number		Page _____ of _____			
City VERNON HILLS	State IL	Zip Code 60061	Site Contact DUMAS	Lab Contact		Analysis (Attach list if more space is needed)			
Project Name and Location (State) BMD 341 EAST OMAHA ST IL			Carrier/Waybill Number		Special Instructions/ Conditions of Receipt				
Contract/Purchase Order/Quote No. 26580-XG									
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Matrix					Containers & Preservatives	
Date			Time						
F-8			7/31/02		0830		120G		
H-6			0845						
H-10			0915						
H-12			0945						
Possible Hazard Identification			Sample Disposal		(A fee may be assessed if samples are retained longer than 1 month)				
<input checked="" type="checkbox"/> Non Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown			<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Turn Around Time Required			QC Requirements (Specify)						
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input checked="" type="checkbox"/> Other 40 days									
1. Relinquished By Eric Reusch			Date 7/31/02		Time 1207				
2. Relinquished By			Date		Time				
3. Relinquished By			Date		Time				
1. Received By Eric Reusch			Date 8.1.02		Time 0915				
2. Received By			Date		Time				
3. Received By			Date		Time				
Comments									

8-7 SW 8.1.02
Lot No.: F2GH
F2H010233

Condition Upon Receipt Form
St. Louis Laboratory

Client: STS Date: 8.1.02 Time: 0915
Quote No: 43710 Initiated by: SW
Shipper/No: FedX 834998435000 COC/RFA Numbers: 115328

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}^*$ Record temperature: <u>6°</u>	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
3. <input type="radio"/> Y <input checked="" type="radio"/> N <input checked="" type="radio"/> N/A	Sample received with proper pH**.	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. <input type="radio"/> Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes:

Corrective Action:

☐ Client's Name: _____ Informed verbally on: _____ By: _____

☐ Client's Name: _____ Informed in writing on: _____ By: _____

☐ Sample(s) processed "as is".

☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature] Date: 8.1.02

Project Management Review: [Signature] Date: 08-01-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM

SEVERN

TRENT

SERVICES

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

REVISED

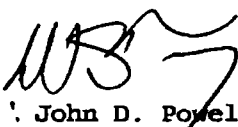
Waste Characterization

Lot #: F2G310222

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.


For: John D. Powell
Project Manager

August 16, 2002

Case Narrative
LOT NUMBER: F2G310222

This report contains the analytical results for the three samples received under chain of custody by STL St. Louis on July 31, 2002. These samples are associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2G310222 (1): F4-VP

F2G310222 (3): F10-VP

F2G310222 (2): F6-VP

Affected Methods:

8081A

Case Narrative:

MS/MSD was not analyzed due to significant matrix interferences observed in the associated sample. Results are provided with this narrative.

The samples were analyzed at a dilution due to the presence of matrix interferences. The reporting limit has been adjusted for the dilution.

METHODS SUMMARY

F2G310222

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2G310222

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
E5M44	001	F4-VP		07/26/02	14:30
E5MSM	002	F6-VP		07/26/02	14:30
E5M6F	003	F10-VP		07/26/02	14:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, recovery, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F4-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-001 Work Order #....: E5M441AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:05
Dilution Factor: 20
% Moisture.....: 10 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	38	ug/kg
Heptachlor epoxide	ND	38	ug/kg
Aldrin	ND	38	ug/kg
Chlordane (technical)	ND	380	ug/kg
alpha-BHC	ND	38	ug/kg
gamma-BHC (Lindane)	ND	38	ug/kg
4,4'-DDT	ND	38	ug/kg
Dieldrin	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F4-VP

General Chemistry

Lot-Sample #....: F2G310222-001 Work Order #....: E5M44 Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
% Moisture.....: 10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	10.1	0.10	%	NCANW 160.3 MOD	08/01-08/02/02	2213219
		Dilution Factor: 1		Analysis Time...: 00:04		

LOT# F2G310222

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F6-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-002 Work Order #....: E5M5M1AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:24
Dilution Factor: 20
% Moisture.....: 10 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	38	ug/kg
Heptachlor epoxide	ND	38	ug/kg
Aldrin	ND	38	ug/kg
Chlordane (technical)	ND	380	ug/kg
alpha-BHC	ND	38	ug/kg
gamma-BHC (Lindane)	ND	38	ug/kg
4,4'-DDT	ND	38	ug/kg
Dieldrin	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS COMS., LTD.

Client Sample ID: F6-VP

General Chemistry

Lot-Sample #....: F2G310222-002 Work Order #....: E5M5M Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
% Moisture.....: 10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	10.1	0.10	%	MCANW 160.3 MOD	08/01-08/02/02	2213219

Dilution Factor: 1 Analysis Time...: 00:04

LOT# F2G310222

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F10-VP

GC Semivolatiles

Lot-Sample #....: F2G310222-003 Work Order #....: E5M6F1AA Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
Prep Date.....: 08/01/02 Analysis Date...: 08/08/02
Prep Batch #....: 2213116 Analysis Time...: 01:43
Dilution Factor: 20
% Moisture.....: 6.8 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	36	ug/kg
Heptachlor epoxide	ND	36	ug/kg
Aldrin	ND	36	ug/kg
Chlordane (technical)	ND	360	ug/kg
alpha-BHC	ND	36	ug/kg
gamma-BHC (Lindane)	ND	36	ug/kg
4,4'-DDT	ND	36	ug/kg
Dieldrin	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL	(57 - 116)
Decachlorobiphenyl	0.0 DIL	(45 - 147)

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.
Results and reporting limits have been adjusted for dry weight.

STL ST. LOUIS

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: F10-VP

General Chemistry

Lot-Sample #....: F2G310222-003 Work Order #....: E5M6F Matrix.....: SOLID
Date Sampled....: 07/26/02 14:30 Date Received...: 07/31/02
% Moisture.....: 6.8

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	6.8	0.10	%	MCAMW 160.3 MOD	08/01-08/02/02	2213219
		Dilution Factor: 1		Analysis Time...: 00:04		

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F2G310222
MB Lot-Sample #: F2H010000-116

Work Order #...: E5PJN1AA

Matrix.....: SOLID

Analysis Date...: 08/07/02
Dilution Factor: 1

Prep Date.....: 08/01/02

Analysis Time...: 21:04

Prep Batch #...: 2213116

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Heptachlor	ND	1.7	ug/kg		SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg		SW846 8081A
Aldrin	ND	1.7	ug/kg		SW846 8081A
Chlordane (technical)	ND	17	ug/kg		SW846 8081A
alpha-BHC	ND	1.7	ug/kg		SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg		SW846 8081A
4,4'-DDT	ND	1.7	ug/kg		SW846 8081A
Dieldrin	ND	1.7	ug/kg		SW846 8081A
		PERCENT	RECOVERY		
SURROGATE	RECOVERY		LIMITS		
Tetrachloro-m-xylene	74		(57 - 116)		
Decachlorobiphenyl	93		(45 - 147)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: F2G310222 Work Order #....: E5PJN1AC Matrix.....: SOLID
 LCS Lot-Sample#: F2H010000-116
 Prep Date.....: 08/01/02 Analysis Date...: 08/07/02
 Prep Batch #....: 2213116 Analysis Time...: 21:23
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Heptachlor	89	(58 - 150)	SW846 8081A
Heptachlor epoxide	85	(62 - 150)	SW846 8081A
Aldrin	82	(57 - 150)	SW846 8081A
alpha-BHC	79	(56 - 150)	SW846 8081A
gamma-BHC (Lindane)	83	(59 - 150)	SW846 8081A
Endrin	94	(62 - 150)	SW846 8081A
4,4'-DDT	103	(66 - 150)	SW846 8081A
Dieldrin	86	(57 - 150)	SW846 8081A
beta-BHC	81	(53 - 150)	SW846 8081A
delta-BHC	54	(49 - 141)	SW846 8081A
alpha-Chlordane	85	(57 - 150)	SW846 8081A
gamma-Chlordane	85	(58 - 150)	SW846 8081A
4,4'-DDD	86	(60 - 149)	SW846 8081A
4,4'-DDE	87	(65 - 150)	SW846 8081A
Endosulfan I	85	(60 - 146)	SW846 8081A
Endosulfan II	86	(59 - 150)	SW846 8081A
Endosulfan sulfate	78	(59 - 148)	SW846 8081A
Endrin aldehyde	77	(43 - 150)	SW846 8081A
Endrin ketone	88	(61 - 150)	SW846 8081A
Methoxychlor	96	(62 - 150)	SW846 8081A
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Tetrachloro-m-xylene	76	(66 - 133)	
Decachlorobiphenyl	88	(59 - 146)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 7/31/02
Time: 12:48:50
User Id.: ZAHNERM

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2G310222-001
PROJECT #: WORK ORDER: E5M44
REPORT TO: Rich Berggreen RECEIVING DATE: 7/31/02
P.O. NUMBER: SAMPLING DATE: 7/26/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/07/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/07/02
STORAGE LOC: R 47 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: F4-VP
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Pesticides (8081A)	06	7/31/02	8/09/02	9/18/02
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SONICATION - Low Level

STL: Pesticides by 8081A

(A-13-QJ-01) E5M44-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	06	7/31/02	0/00/00	11/02/02
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NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E5M44-1-AC Protocol: A QC Program: STANDARD TEST SET

STL ST. LOUIS

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 7/31/02
Time: 12:48:50
User Id.: ZAHNERM

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2G310222-002
PROJECT #: WORK ORDER: E5M5M
REPORT TO: Rich Berggreen RECEIVING DATE: 7/31/02
P.O. NUMBER: SAMPLING DATE: 7/26/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/07/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/07/02
STORAGE LOC: R 47 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: F6-VP
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	<u>WRK</u> <u>LOC</u>	<u>REQUEST</u> <u>DATE</u>	<u>EXTRACTION</u> <u>EXP DATE</u>	<u>ANALYSIS</u> <u>EXP DATE</u>
Pesticides (9081A)	06	7/31/02	8/09/02	9/18/02
SONICATION - Low Level				
STL: Pesticides by 8081A				
(A-13-QJ-01) E5M5M-1-AA Protocol: A QC Program: STANDARD TEST SET				
Moisture, Percent (160.3)	06	7/31/02	0/00/00	11/02/02
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) E5M5M-1-AC Protocol: A QC Program: STANDARD TEST SET				

PSL20300
Page 1SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. LouisRun Date: 7/31/02
Time: 12:48:50
User Id.: ZAHNERM

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2G310222-003
PROJECT #: WORK ORDER: E5M6F
REPORT TO: Rich Berggreen RECEIVING DATE: 7/31/02
P.O. NUMBER: SAMPLING DATE: 7/26/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 8/07/02N
AMOUNT REC'D: 120G REPORT DUE DATE: 8/07/02
STORAGE LOC: R 47 PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 14:30
MATRIX: SOLID RECEIVING TIME: 9:15
USAF MATRIX:
SAMPLE ID: F10-VP
QC PACKAGE: Report SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

WRK	REQUEST	EXTRACTION	ANALYSIS
LOC	DATE	EXP DATE	EXP DATE

Pesticides (8081A)	06	7/31/02	8/09/02	9/18/02
--------------------	----	---------	---------	---------

SONICATION - Low Level

STL: Pesticides by 8081A

(A-13-QJ-01) E5M6F-1-AA Protocol: A QC Program: STANDARD TEST SET

Moisture, Percent (160.3)	06	7/31/02	0/00/00	11/02/02
---------------------------	----	---------	---------	----------

NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

(A-88-WM-01) E5M6F-1-AC Protocol: A QC Program: STANDARD TEST SET

Chain of Custody Record



Severn Trent Laboratories, Inc.

STL 4124 (0801)

Client STS		Project Manager Steve Korndorfer		Date 7/30/02	Chain of Custody Number 115327
Address 750 Corporate Woods Parkway		Telephone Number (Area Code)/Fax Number 847-279-2448		Lab Number	Page 1 of 1
City Vernon Hills	State IL	Zip Code 60061	Site Contact	Lab Contact	

Project Name and Location (State) 341 East Ohio ST		Carrier/Waybill Number		Analysis (Attach list if more space is needed)	
Contract/Purchase Order/Quote No. 1-25585-XI					

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives										Pesticides (See Instructions)	Special Instructions/ Conditions of Receipt
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
F4-VP	7/26/02	14:30																	SW 846 8081 Pesticides to include only: Aldrin alpha-BHC chlorodane, tech. dieldrin heptachlor heptachlor epoxide Lindane 4,4' DDT
F6-VP	7/26/02	14:35																	
F10-VP	7/26/02	14:50																	

Possible Hazard Identification			Sample Disposal			(A fee may be assessed if samples are retained longer than 1 month)		
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input checked="" type="checkbox"/> Archive For 1 Months	

Turn Around Time Required		QC Requirements (Specify)	
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days
<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other	8/5/02 P4P	

1. Relinquished By 	Date 7/30/02	Time 16:45	1. Received By 	Date 7/3/02	Time 0915
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

SEVERN

TRENT

SERVICES

Lot No.: F2G310222Condition Upon Receipt Form
St. Louis LaboratoryClient: STSDate: 7/3/02 Time: 0915Quote No: 43710Initiated by: JHShipper/No: Fed Ex 834998434687COC/RFA Numbers: 115327

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}^*$	6. <input checked="" type="radio"/> N	Sample received with Chain of Custody.
	Record temperature: <u>3</u>	7. <input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers.
3. Y N <input checked="" type="radio"/> N/A	Sample received with proper pH**.	8. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on cooler.
4. <input checked="" type="radio"/> N	Sample received in proper containers.	9. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes: 8,9) No seals present

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature] Date: 7/3/02Project Management Review: [Signature] Date: 08-01-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR
INITIALS AND THE DATE NEXT TO THAT ITEM

APPENDIX H

Sidewalk MicroR Survey Results



Memo

To: Rich Berggreen, STS Consultants
From: Glenn Huber
CC:
Date: 10/29/02
Re: 341 East Ohio Street Site – Sidewalk Surveys

On October 29, 2002, I performed exposure rate surveys of areas where thorium contamination is known to exist underneath the sidewalks at the 341 East Ohio Street Site. Surveys were performed using a Ludlum Model 3 MicroR meter with 1"x1" NaI probe (serial no. 113256). Exposure rates were recorded at the surface and at one meter above the surface.

Grid Location	Surface uR/hr	1 meter uR/hr
A/3-4	5-7	5-7
A/12-14	6-9	6-9
N/8.5-12	5-9	6-9

Attached are NUTRANL soil sample results obtained from the walls bordering the property line / sidewalk. If you have any questions, please call me at (815) 485-6161

Glenn Huber, SAHCI

GAH



November 1, 2002

Mr. Fred Micke, On-Scene Coordinator
Ms. Verneta Simon, On-Scene Coordinator
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: 341 E. Ohio Street, Radiation Survey of Adjacent Sidewalk Area – STS Project No. 1-25585-XI,
Correspondence No. 136

Dear Mr. Micke and Ms. Simon:

In response to your request made to Rich Berggreen on October 23, 2002, a field radiation survey was completed at areas adjacent to the above-referenced site, where radiologically-impacted soil appears to exist beneath the sidewalk. As you know, all radiological-impacted soil above the action level established in the Amended Removal Action Work Plan (7.1 pCi/g) was removed from within the property limits of the site during the recently completed Removal Action. Fill material exposed at three locations along the excavation wall beyond the property limits (beneath the sidewalk) appeared to exhibit radioactivity above the cleanup level based on the final verification surveys performed in those areas. This material was not removed because it was beyond the property limit. Furthermore, from a practical standpoint removing the fill would potentially result in undermining and settling or collapse of the sidewalk.

On October 29, 2002, a microR survey was conducted of the locations where impacted material is believed to remain beyond the property limit. The locations surveyed were:

- South sidewalk, along former project grid line A, between grid lines 3 to 4 and 12 to 14; and
- North sidewalk, along former project grid line N, between grid lines 8.5 to 12.

The following table presents the ranged of the microR readings at the sidewalk surface and at a distance of 1 meter above the sidewalk surface for the survey alignments noted above. The survey was performed using a Ludlum Model 3 MicroR Meter with 1' x 1' NaI probe (Serial No. 113256).

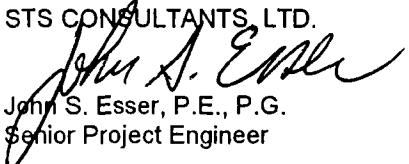
Location	Sidewalk Surface (μ R/hr)	1 meter above Sidewalk Surface (μ R/hr)
Along A, from 3 to 4	5 – 7	5 – 7
Along A, from 12 to 14	6 – 9	6 – 9
Along N, from 8.5 to 12	5 – 9	6 – 9

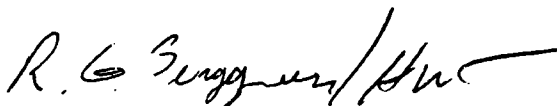
Attached please find the NUTRANL analytical results for samples collected from the locations exhibiting residual impacts. The samples are from A, 2.75 to 3.5; A, 12.25; and N, 10. The analysis shows total radium levels for these three locations of 5.86 pCi/g, 8.17 pCi/g, and 240.66 pCi/g, respectively.

Please contact us with any additional questions you may have regarding this matter.

Regards,

STS CONSULTANTS, LTD.


John S. Esser, P.E., P.G.
Senior Project Engineer


Richard G. Berggreen, C.P.G.
Principal Geologist

Attachments: NUTRANL Gamma Spec Report

Cc: Mr. Timothy Ramsey (Piper Rudnick)

[illegible][illegible]

APPENDIX I

USEPA Site Restoration Plan Concurrence





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

OCT 24 2002

REPLY TO THE ATTENTION OF:

SE-5J

VIA FACSIMILE (847) 279-2510 AND U.S. MAIL

Mr. Richard Berggreen
Mr. John Esser
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: 341 East Ohio Work Plan
Lindsay Light II Site/North McClurg Court

Dear Messrs. Berggreen and Esser:

U.S. EPA has reviewed your facsimile dated October 17, 2002, which requested written approval of the following measures:

1. The site will be rough-graded to eliminate significant depressions or mounds.
2. Slopes will be as flat as practical to minimize the potential for erosion.
3. Temporary construction fencing will be replaced with a 6-foot chain-link fence, two truck access gates, and two pedestrian access gates.
4. Gravel cover over the remainder of the site in a thickness that will prevent wind entrainment of the underlying soil.

U.S. EPA approves the above measures.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886-5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5026.

Sincerely,

A handwritten signature in black ink that reads "Verneta Simon".

Verneta Simon
On-Scene Coordinator

cc: Naren Prasad, City of Chicago - Department of Environment

APPENDIX J

Air Monitoring Results

- a. Termination of Air Monitoring Correspondence
- b. Perimeter Air Monitoring
- c. Personal Air Monitoring



Termination of Air Monitoring Correspondence





October 8, 2002

Mr. Fred Micke, On-Scene Coordinator
Ms. Verneta Simon, On-Scene Coordinator
U. S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604

RE: Cessation of Air Monitoring, 341 East Ohio Street Site, Chicago, Illinois - STS Project
No. 1-25585-XI, Correspondence No. 128


Dear Mr. Micke and Ms. Simon:


This letter is to confirm your concurrence with the cessation of air monitoring at the above referenced site. On Tuesday October 1, 2002, during a site visit to verify the cleanup of radiological impacts, the STS personnel on site were advised that the verification survey indicated there was no remaining radiological-impacted material. Samples were taken for confirmation and will be provided to USEPA for analysis. Based on the field determination that all radiologically-impacted material was removed from the site, we were advised by USEPA that radiological air monitoring would no longer be required. As a result, no further sampling was performed. The analysis of previously collected samples will continue until all collected samples have been tested through the 4-day decay period for radon progeny.

Please provide written confirmation for our files of your concurrence with this directive to discontinue air monitoring at this site. Thank you for your attention to this matter.

Regards,

STS CONSULTANTS, LTD.


John S. Esser, P.E., P.G.
Senior Project Engineer


Richard G. Berggreen, C.P.G.
Principal Geologist

cc: Timothy Ramsey, Piper Rudnick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

OCT 09 2002

SE-5J

VIA FACSIMILE (847) 279-2510 AND U.S. MAIL

Mr. Richard Berggreen
STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061

RE: 341 East Ohio Work Plan
Lindsay Light II Site/North McClurg Court

Dear Mr. Berggreen:

This letter is in response to your facsimile dated October 8, 2002 regarding written concurrence for cessation of air monitoring at the above-referenced site. U.S. EPA agrees to the cessation of air monitoring.

If you have any questions regarding this correspondence, please contact me at (312) 886-3601 or Fred Micke, On-Scene Coordinator, at (312) 886-5123, or Larry Jensen, Senior Health Physicist, at (312) 886-5026.

Sincerely,

A handwritten signature in cursive script that reads "Verneta Simon".

Verneta Simon
On-Scene Coordinator

Perimeter Air Monitoring



Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor		Week #1 (2 days) and Week #2 6/6/02-6/14/02		(High Volume)
Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/6/02	524	2.22E-15	1.16E-12	
6/7/02	530	0.00E+00	0.00E+00	
6/10/02	553	3.30E-15	1.82E-12	
6/11/02	573	0.00E+00	0.00E+00	
6/12/02	592	0.00E+00	0.00E+00	
6/13/02	524	4.90E-16	2.57E-13	
6/14/02	581	0.00E+00	0.00E+00	
3877		6.01E-15	3.24E-12	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 8.37E-16 uCi/ml

Percentage of Release Limit of = 20.92%
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/6/02	522	0.00E+00	0.00E+00	
6/7/02	525	8.86E-16	4.65E-13	
6/10/02	555	1.39E-15	7.71E-13	
6/11/02	575	0.00E+00	0.00E+00	
6/12/02	589	9.52E-16	5.61E-13	
6/13/02	528	0.00E+00	0.00E+00	
6/14/02	578	0.00E+00	0.00E+00	
3872		3.23E-15	1.80E-12	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 4.64E-16 uCi/ml

Percentage of Release Limit of = 11.60%
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/6/02	528	0.00E+00	0.00E+00	
6/7/02	528	0.00E+00	0.00E+00	
6/10/02	581	0.00E+00	0.00E+00	
6/11/02	574	0.00E+00	0.00E+00	
6/12/02	597	0.00E+00	0.00E+00	
6/13/02	527	1.95E-15	1.03E-12	
6/14/02	595	7.82E-16	4.65E-13	
3910		2.73E-15	1.49E-12	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 3.82E-16 uCi/ml

Percentage of Release Limit of = 9.55%

4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/6/02	526	0.00E+00	0.00E+00	
6/7/02	525	0.00E+00	0.00E+00	
6/10/02	562	3.05E-15	1.71E-12	
6/11/02	577	8.91E-16	5.14E-13	
6/12/02	584	0.00E+00	0.00E+00	
6/13/02	532	3.23E-15	1.72E-12	
6/14/02	591	0.00E+00	0.00E+00	
3907		7.17E-15	3.95E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 1.01E-15 uCi/ml
Percentage of Release Limit of = 25.25%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 1 & 2

June 6, 2002 - June 14, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1001	6/6/02	8:01am	4:45pm	524	42.5	2.21E+07	6/7/02	37	18	0.7	1.16E-14	6/11/02	21	17	0.133	2.22E-15	55.38%
S1001	6/6/02	8:11am	4:53pm	522	40	2.07E+07	6/7/02	30	16	0.46667	8.27E-15	6/11/02	15	17	0	0.00E+00	0.00%
E1001	6/6/02	7:57am	4:45pm	528	51	2.67E+07	6/7/02	23	16	0.23333	3.21E-15	6/11/02	17	17	0	0.00E+00	0.00%
W1001	6/6/02	8:07am	4:53pm	526	40	2.09E+07	6/7/02	31	18	0.5	8.79E-15	6/11/02	16	17	0	0.00E+00	0.00%
N1002	6/7/02	8:00am	4:50pm	530	52	2.73E+07	6/10/02	20	16	0.13333	1.79E-15	6/12/02	15	19	0	0.00E+00	0.00%
S1002	6/7/02	8:02am	4:47pm	525	53	2.76E+07	6/10/02	28	16	0.4	5.32E-15	6/12/02	21	19	0.067	8.86E-16	22.16%
E1002	6/7/02	8:02am	4:50pm	528	58	3.04E+07	6/10/02	26	16	0.33333	4.03E-15	6/12/02	15	19	0	0.00E+00	0.00%
W1002	6/7/02	8:04am	4:49pm	525	38	1.98E+07	6/10/02	18	16	0.06667	1.24E-15	6/12/02	19	19	0	0.00E+00	0.00%
N1003	6/10/02	8:04am	5:17pm	553	54	2.96E+07	6/11/02	173	17	5.2	6.44E-14	6/14/02	25	17	0.267	3.30E-15	82.60%
S1003	6/10/02	8:05am	5:20pm	555	48	2.64E+07	6/11/02	184	17	5.56667	7.73E-14	6/14/02	20	17	0.1	1.39E-15	34.72%
E1003	6/10/02	8:04am	5:25pm	561	43	2.39E+07	6/11/02	139	17	4.06667	6.24E-14	6/14/02	17	17	0	0.00E+00	0.00%
W1003	6/10/02	8:05am	5:27pm	562	36	2.01E+07	6/11/02	187	17	5.66667	1.04E-13	6/14/02	22	17	0.167	3.05E-15	76.19%
N1004	6/11/02	7:55am	5:28pm	573	58	3.29E+07	6/12/02	108	19	2.96667	3.30E-14	6/17/02	14	22	0	0.00E+00	0.00%
S1004	6/11/02	7:55am	5:30pm	575	48	2.74E+07	6/12/02	91	19	2.4	3.22E-14	6/17/02	15	22	0	0.00E+00	0.00%
E1004	6/11/02	7:55am	5:29pm	574	55	3.13E+07	6/12/02	91	19	2.4	2.81E-14	6/17/02	19	22	0	0.00E+00	0.00%
W1004	6/11/02	7:55am	5:32pm	577	48	2.74E+07	6/12/02	121	19	3.4	4.54E-14	6/17/02	24	22	0.067	8.91E-16	22.26%
N1005	6/12/02	7:53am	5:45pm	592	57	3.34E+07	6/13/02	61	18	1.43333	1.57E-14	6/17/02	18	22	0	0.00E+00	0.00%
S1005	6/12/02	7:51am	5:40pm	589	44	2.57E+07	6/13/02	83	18	2.16667	3.09E-14	6/17/02	24	22	0.067	9.52E-16	23.79%
E1005	6/12/02	7:51am	5:48pm	597	54	3.19E+07	6/13/02	53	18	1.16667	1.34E-14	6/17/02	14	22	0	0.00E+00	0.00%
W1005	6/12/02	7:53am	5:47pm	594	60	3.53E+07	6/13/02	41	18	0.76667	7.96E-15	6/17/02	20	22	0	0.00E+00	0.00%
N1006	6/13/02	8:01am	4:45pm	524	48	2.49E+07	6/14/02	20	17	0.1	1.47E-15	6/18/02	17	16	0.033	4.90E-16	12.26%
S1006	6/13/02	7:57am	4:45pm	528	48	2.51E+07	6/14/02	24	17	0.23333	3.41E-15	6/18/02	14	16	0	0.00E+00	0.00%
E1006	6/13/02	7:58am	4:45pm	527	60	3.13E+07	6/14/02	18	17	0.03333	3.90E-16	6/18/02	21	16	0.167	1.95E-15	48.75%
W1006	6/13/02	7:54am	4:46pm	532	43	2.27E+07	6/14/02	38	17	0.7	1.13E-14	6/18/02	22	16	0.2	3.23E-15	80.87%
N1007	6/14/02	7:59am	5:40pm	581	49	2.82E+07	6/17/02	20	22	0	0.00E+00	6/18/02	16	16	0	0.00E+00	0.00%
S1007	6/14/02	7:57am	5:35pm	578	48	2.75E+07	6/17/02	19	22	0	0.00E+00	6/18/02	16	16	0	0.00E+00	0.00%
E1007	6/14/02	7:50am	5:45pm	595	53	3.13E+07	6/17/02	26	22	0.13333	1.56E-15	6/18/02	18	16	0.067	7.82E-16	19.55%
W1007	6/14/02	7:56am	5:47pm	591	54	3.16E+07	6/17/02	18	22	0	0.00E+00	6/18/02	14	16	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
 341 East Ohio Street Project- Chicago, IL

North Monitor **Week #3 6/17/02-6/21/02** **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/17/02	590	0.00E+00	0.00E+00	
6/18/02	530	0.00E+00	0.00E+00	
6/19/02	567	0.00E+00	0.00E+00	
6/20/02	575	9.75E-16	5.61E-13	
6/21/02	582	4.24E-16	2.47E-13	
2844		1.40E-15	8.07E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A 9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 2.84E-16 uCi/ml

Percentage of Release Limit of = 7.10%
 4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/17/02	590	4.18E-16	2.47E-13	
6/18/02	530	0.00E+00	0.00E+00	
6/19/02	566	0.00E+00	0.00E+00	
6/20/02	578	0.00E+00	0.00E+00	
6/21/02	579	4.18E-16	2.42E-13	
2843		8.36E-16	4.89E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A 9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 1.72E-16 uCi/ml

Percentage of Release Limit of = 4.30%
 4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/17/02	585	0.00E+00	0.00E+00	
6/18/02	560	0.00E+00	0.00E+00	
6/19/02	574	0.00E+00	0.00E+00	
6/20/02	572	0.00E+00	0.00E+00	
6/21/02	583	0.00E+00	0.00E+00	
2854		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A 9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
 4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/17/02	594	3.77E-16	2.24E-13	
6/18/02	565	1.26E-15	7.12E-13	
6/19/02	569	0.00E+00	0.00E+00	
6/20/02	583	0.00E+00	0.00E+00	
6/21/02	570	0.00E+00	0.00E+00	
2881		1.64E-15	9.36E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 3.25E-16 uCi/ml

Percentage of Release Limit of = 8.12%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 3

June 17, 2002 - June 21, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1008	6/17/02	7:55am	5:45pm	590	50	2.92E+07	6/18/02	184	18	5.6	7.02E-14	6/21/02	13	16	0	0.00E+00	0.00%
S1008	6/17/02	7:51am	5:41pm	590	50	2.92E+07	6/18/02	199	16	6.1	7.65E-14	6/21/02	17	16	0.033	4.18E-16	10.45%
E1008	6/17/02	7:55am	5:20pm	565	52	2.91E+07	6/18/02	158	16	4.73333	5.96E-14	6/21/02	15	16	0	0.00E+00	0.00%
W1008	6/17/02	7:51am	5:45pm	594	55	3.24E+07	6/18/02	151	16	4.5	5.10E-14	6/21/02	17	16	0.033	3.77E-16	9.44%
N1009	6/18/02	8:00am	4:50pm	530	53	2.78E+07	6/19/02	165	25	4.66667	6.15E-14	6/24/02	16	22	0	0.00E+00	0.00%
S1009	6/18/02	8:00am	4:50pm	530	52	2.73E+07	6/19/02	189	25	5.46667	7.34E-14	6/24/02	19	22	0	0.00E+00	0.00%
E1009	6/18/02	8:00am	5:20pm	560	56	3.11E+07	6/19/02	113	25	2.93333	3.46E-14	6/24/02	20	22	0	0.00E+00	0.00%
W1009	6/18/02	8:00am	5:25pm	585	52	2.91E+07	6/19/02	194	25	5.63333	7.09E-14	6/24/02	25	22	0.1	1.26E-15	31.48%
N1010	6/19/02	8:03am	5:30pm	567	51	2.87E+07	6/20/02	220	17	6.76667	8.66E-14	6/24/02	21	22	0	0.00E+00	0.00%
S1010	6/19/02	8:04am	5:30pm	586	44	2.47E+07	6/20/02	262	17	8.16667	1.21E-13	6/24/02	18	22	0	0.00E+00	0.00%
E1010	6/19/02	8:00am	5:34pm	574	45	2.58E+07	6/20/02	224	17	6.9	9.88E-14	6/24/02	20	22	0	0.00E+00	0.00%
W1010	6/19/02	8:01am	5:30pm	569	45	2.54E+07	6/20/02	269	17	8.4	1.21E-13	6/24/02	14	22	0	0.00E+00	0.00%
N1011	6/20/02	8:05am	5:40pm	575	44	2.51E+07	6/21/02	267	16	8.36667	1.22E-13	6/25/02	20	18	0.067	9.75E-16	24.37%
S1011	6/20/02	8:00am	5:38pm	578	38	2.18E+07	6/21/02	286	16	8.33333	1.40E-13	6/25/02	18	18	0	0.00E+00	0.00%
E1011	6/20/02	8:05am	5:37pm	572	51	2.89E+07	6/21/02	228	16	7.06667	8.96E-14	6/25/02	16	18	0	0.00E+00	0.00%
W1011	6/20/02	8:00am	5:43pm	583	54	3.12E+07	6/21/02	245	16	7.63333	8.97E-14	6/25/02	18	18	0	0.00E+00	0.00%
N1012	6/21/02	8:08am	5:50pm	582	50	2.88E+07	6/24/02	20	22	0	0.00E+00	6/25/02	19	18	0.033	4.24E-16	10.59%
S1012	6/21/02	8:08am	5:45pm	579	51	2.93E+07	6/24/02	22	22	0	0.00E+00	6/25/02	19	18	0.033	4.18E-16	10.44%
E1012	6/21/02	8:07am	5:50pm	583	52	3.00E+07	6/24/02	15	22	0	0.00E+00	6/25/02	16	18	0	0.00E+00	0.00%
W1012	6/21/02	8:10am	5:40pm	570	47	2.66E+07	6/24/02	19	22	0	0.00E+00	6/25/02	15	18	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
 341 East Ohio Street Project- Chicago, IL

North Monitor **Week #4** 6/24/02-6/28/02 **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/24/02	573	0.00E+00	0.00E+00	
6/25/02	510	0.00E+00	0.00E+00	
6/26/02	554	0.00E+00	0.00E+00	
6/27/02	552	1.02E-15	5.63E-13	
6/28/02	545	0.00E+00	0.00E+00	
2734		1.02E-15	5.63E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 2.06E-16 uCi/ml

Percentage of Release Limit of = 5.15%
 4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/24/02	585	0.00E+00	0.00E+00	
6/25/02	530	0.00E+00	0.00E+00	
6/26/02	552	0.00E+00	0.00E+00	
6/27/02	588	0.00E+00	0.00E+00	
6/28/02	540	4.57E-16	2.47E-13	
2753		4.57E-16	2.47E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 8.96E-17 uCi/ml

Percentage of Release Limit of = 2.24%
 4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/24/02	575	0.00E+00	0.00E+00	
6/25/02	510	0.00E+00	0.00E+00	
6/26/02	547	1.00E-15	5.47E-13	
6/27/02	563	1.48E-15	8.22E-13	
6/28/02	547	3.30E-15	1.81E-12	
2742		5.76E-15	3.17E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 1.16E-15 uCi/ml

Percentage of Release Limit of = 28.94%
 4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/24/02	565	1.46E-15	8.25E-13	
6/25/02	525	0.00E+00	0.00E+00	
6/26/02	547	0.00E+00	0.00E+00	
6/27/02	567	1.81E-15	1.03E-12	
6/28/02	540	0.00E+00	0.00E+00	
	2744	3.27E-15	1.85E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = **6.75E-16 uCi/ml**

Percentage of Release Limit of = **16.87%**

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week4

June 24, 2002 - June 28, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration In uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration In uCi/ml	
N1013	6/24/02	7:55am	5:28pm	573	39	2.21E+07	6/25/02	154	18	4.53333	7.51E-14	6/28/02	15	19	0	0.00E+00	0.00%
S1013	6/24/02	7:58am	5:23pm	565	46	2.58E+07	6/25/02	148	18	4.33333	6.17E-14	6/28/02	18	19	0	0.00E+00	0.00%
E1013	6/24/02	7:55am	5:30pm	575	45	2.56E+07	6/25/02	169	18	5.03333	7.20E-14	6/28/02	19	19	0	0.00E+00	0.00%
W1013	6/24/02	7:58am	5:23pm	565	45	2.52E+07	6/25/02	140	18	4.06667	5.92E-14	6/28/02	22	19	0.1	1.46E-15	36.38%
N1014	6/25/02	8:10am	4:40pm	510	41	2.07E+07	6/26/02	374	19	11.8333	2.09E-13	7/1/02	16	20	0	0.00E+00	0.00%
S1014	6/25/02	8:00am	4:50pm	530	48	2.52E+07	6/26/02	393	19	12.4667	1.81E-13	7/1/02	17	20	0	0.00E+00	0.00%
E1014	6/25/02	8:10am	4:40pm	510	54	2.73E+07	6/26/02	450	18	14.3667	1.93E-13	7/1/02	20	20	0	0.00E+00	0.00%
W1014	6/25/02	8:00am	4:45pm	525	43	2.24E+07	6/26/02	483	19	15.4667	2.53E-13	7/1/02	19	20	0	0.00E+00	0.00%
N1015	6/26/02	8:00am	5:14pm	554	54	2.96E+07	6/27/02	216	19	6.56667	8.12E-14	7/1/02	17	20	0	0.00E+00	0.00%
S1015	6/26/02	8:00am	5:12pm	552	48	2.52E+07	6/27/02	289	19	9	1.31E-13	7/1/02	18	20	0	0.00E+00	0.00%
E1015	6/26/02	8:08am	5:15pm	547	45	2.44E+07	6/27/02	277	19	8.6	1.29E-13	7/1/02	22	20	0.067	1.00E-15	25.05%
W1015	6/26/02	8:08am	5:15pm	547	44	2.38E+07	6/27/02	259	19	8	1.23E-13	7/1/02	18	20	0	0.00E+00	0.00%
N1016	6/27/02	8:07am	5:19pm	552	44	2.41E+07	6/28/02	58	19	1.3	1.96E-14	7/2/02	18	16	0.067	1.02E-15	25.39%
S1016	6/27/02	7:59am	5:25pm	568	47	2.64E+07	6/28/02	41	19	0.73333	1.02E-14	7/2/02	16	16	0	0.00E+00	0.00%
E1016	6/27/02	8:03am	5:26pm	563	45	2.51E+07	6/28/02	42	19	0.76667	1.12E-14	7/2/02	19	16	0.1	1.46E-15	36.51%
W1016	6/27/02	7:58am	5:25pm	567	48	2.70E+07	6/28/02	53	19	1.13333	1.54E-14	7/2/02	20	16	0.133	1.81E-15	45.31%
N1017	6/28/02	8:00am	5:05pm	545	42	2.27E+07	7/1/02	24	20	0.13333	2.16E-15	7/2/02	16	16	0	0.00E+00	0.00%
S1017	6/28/02	8:00am	5:00pm	540	50	2.68E+07	7/1/02	22	20	0.06667	9.14E-16	7/2/02	17	16	0.033	4.57E-16	11.42%
E1017	6/28/02	8:00am	5:07pm	547	41	2.22E+07	7/1/02	18	20	0	0.00E+00	7/2/02	22	16	0.2	3.30E-15	82.48%
W1017	6/28/02	8:00am	5:00pm	540	50	2.68E+07	7/1/02	20	20	0	0.00E+00	7/2/02	16	16	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
 341 East Ohio Street Project- Chicago, IL

North Monitor		Week #6 7/1/02-7/3/02		(High Volume)
Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/1/02	475	0.00E+00	0.00E+00	No Work - 4th of July Holiday No Work - 4th of July Holiday
7/2/02	496	0.00E+00	0.00E+00	
7/3/02	460	0.00E+00	0.00E+00	
7/4/02	0			
7/5/02	0			
1431		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (North) =	0.00E+00 uCi/ml
Percentage of Release Limit of =	0.00%
4E-15uCi/ml	

South Monitor				
Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/1/02	470	5.47E-18	2.57E-13	No Work - 4th of July Holiday No Work - 4th of July Holiday
7/2/02	496	5.41E-18	2.68E-13	
7/3/02	459	0.00E+00	0.00E+00	
7/4/02	0			
7/5/02	0			
1425		1.09E-15	5.25E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (South) =	3.69E-16 uCi/ml
Percentage of Release Limit of =	9.22%
4E-15uCi/ml	

East Monitor				
Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/1/02	470	0.00E+00	0.00E+00	No Work - 4th of July Holiday No Work - 4th of July Holiday
7/2/02	494	0.00E+00	0.00E+00	
7/3/02	455	2.03E-15	9.24E-13	
7/4/02	0			
7/5/02	0			
1419		2.03E-15	9.24E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (East) =	6.51E-16 uCi/ml
Percentage of Release Limit of =	16.27%
4E-15uCi/ml	

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/1/02	477	1.03E-15	4.91E-13	No Work - 4th of July Holiday No Work - 4th of July Holiday
7/2/02	505	1.93E-15	9.75E-13	
7/3/02	456	1.42E-15	6.48E-13	
7/4/02	0			
7/5/02	0			
1438		4.38E-15	2.11E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 1.47E-15 uCi/ml

Percentage of Release Limit of = 36.74%

341 East Ohio Street Project - Chicago, IL

July 1, 2002 - July 3, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration In uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration In uCi/ml	
N1018	7/1/02	8:00am	3:55pm	475	35	1.65E+07	7/2/02	272	16	8.53333	1.90E-13	7/8/02	21	22	0	0.00E+00	0.00%
S1018	7/1/02	8:00am	3:50pm	470	48	2.24E+07	7/2/02	286	16	9	1.48E-13	7/8/02	23	22	0.033	5.47E-16	13.67%
E1018	7/1/02	8:00am	3:50pm	470	40	1.88E+07	7/2/02	232	16	7.2	1.42E-13	7/8/02	20	22	0	0.00E+00	0.00%
W1018	7/1/02	8:00am	3:57pm	477	50	2.36E+07	7/2/02	317	16	10.0333	1.58E-13	7/8/02	24	22	0.067	1.03E-15	25.85%
N1019	7/2/02	8:01am	4:17pm	496	43	2.11E+07	7/3/02	124	18	3.53333	6.13E-14	7/8/02	16	22	0	0.00E+00	0.00%
S1019	7/2/02	7:58am	4:14pm	496	48	2.26E+07	7/3/02	116	18	3.26667	5.30E-14	7/8/02	23	22	0.033	5.41E-16	13.51%
E1019	7/2/02	8:03am	4:17pm	494	42	2.06E+07	7/3/02	91	18	2.43333	4.34E-14	7/8/02	22	22	0	0.00E+00	0.00%
W1019	7/2/02	7:55am	4:20pm	505	38	1.90E+07	7/3/02	144	18	4.2	8.10E-14	7/8/02	25	22	0.1	1.93E-15	48.20%
N1020	7/3/02	8:00am	3:40pm	460	39	1.78E+07	No Day After Analysis Performed Due to 4th of July Holiday ↓					7/8/02	18	22	0	0.00E+00	0.00%
S1020	7/3/02	8:03am	3:42pm	459	43	1.96E+07						7/8/02	22	22	0	0.00E+00	0.00%
E1020	7/3/02	8:02am	3:37pm	455	40	1.80E+07						7/8/02	25	22	0.1	2.03E-15	50.82%
W1020	7/3/02	7:59am	3:35pm	456	38	1.72E+07						7/8/02	24	22	0.067	1.42E-15	35.59%

Only 3 sample collection days - 4th of July Holiday

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
341 East Ohio Street Project- Chicago, IL

North Monitor **Week #6 7/8/02-7/12/02** **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/8/02	542	0.00E+00	0.00E+00	
7/9/02	540	0.00E+00	0.00E+00	
7/10/02	503	0.00E+00	0.00E+00	
7/11/02	521	0.00E+00	0.00E+00	
7/12/02	553	0.00E+00	0.00E+00	
2659		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/8/02	545	9.43E-16	5.14E-13	
7/9/02	545	0.00E+00	0.00E+00	
7/10/02	499	1.07E-15	5.34E-13	
7/11/02	523	0.00E+00	0.00E+00	
7/12/02	539	0.00E+00	0.00E+00	
2651		2.01E-15	1.05E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 3.95E-16 uCi/ml

Percentage of Release Limit of = 9.88%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/8/02	544	1.55E-15	8.43E-13	
7/9/02	545	1.74E-15	9.48E-13	
7/10/02	504	0.00E+00	0.00E+00	
7/11/02	524	0.00E+00	0.00E+00	
7/12/02	545	0.00E+00	0.00E+00	
2662		3.29E-15	1.79E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 6.73E-16 uCi/ml

Percentage of Release Limit of = 16.82%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/8/02	548	0.00E+00	0.00E+00	
7/9/02	540	5.44E-16	2.94E-13	
7/10/02	502	1.84E-15	9.24E-13	
7/11/02	520	0.00E+00	0.00E+00	
7/12/02	554	0.00E+00	0.00E+00	
	2664	2.38E-15	1.22E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	4.57E-16 uCi/ml
Percentage of Release Limit of =	11.42%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 6

July 8, 2002 - July 12, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1021	7/8/02	8:00am	5:02pm	542	34	1.83E+07	7/9/02	212	22	6.33333	1.27E-13	7/12/02	17	17	0	0.00E+00	0.00%
S1021	7/8/02	8:00am	5:05pm	545	48	2.59E+07	7/9/02	222	22	6.66667	9.43E-14	7/12/02	19	17	0.067	9.43E-16	23.57%
E1021	7/8/02	8:00am	5:04pm	544	44	2.37E+07	7/9/02	184	22	5.4	8.35E-14	7/12/02	20	17	0.1	1.55E-15	38.64%
W1021	7/8/02	8:00am	5:08pm	548	47	2.55E+07	7/9/02	326	22	10.1333	1.46E-13	7/12/02	17	17	0	0.00E+00	0.00%
N1022	7/9/02	8:00am	5:00pm	540	50	2.68E+07	7/10/02	101	18	2.76667	3.79E-14	7/15/02	16	17	0	0.00E+00	0.00%
S1022	7/9/02	8:00am	5:05pm	545	51	2.75E+07	7/10/02	102	18	2.8	3.73E-14	7/15/02	17	17	0	0.00E+00	0.00%
E1022	7/9/02	8:00am	5:05pm	545	39	2.11E+07	7/10/02	82	18	2.13333	3.71E-14	7/15/02	20	17	0.1	1.74E-15	43.52%
W1022	7/9/02	8:00am	5:00pm	540	42	2.25E+07	7/10/02	132	18	3.8	6.20E-14	7/15/02	18	17	0.033	5.44E-16	13.59%
N1023	7/10/02	7:57am	4:20pm	503	48	2.39E+07	7/11/02	57	19	1.26667	1.94E-14	7/15/02	16	17	0	0.00E+00	0.00%
S1023	7/10/02	8:01am	4:20pm	499	46	2.27E+07	7/11/02	54	19	1.16667	1.88E-14	7/15/02	19	17	0.067	1.07E-15	26.86%
E1023	7/10/02	7:59am	4:23pm	504	40	2.00E+07	7/11/02	55	19	1.2	2.20E-14	7/15/02	16	17	0	0.00E+00	0.00%
W1023	7/10/02	7:58am	4:20pm	502	40	1.99E+07	7/11/02	84	19	2.16667	3.99E-14	7/15/02	20	17	0.1	1.84E-15	46.06%
N1024	7/11/02	8:04am	4:45pm	521	50	2.58E+07	7/12/02	51	17	1.13333	1.61E-14	7/16/02	18	21	0	0.00E+00	0.00%
S1024	7/11/02	8:02am	4:45pm	523	49	2.54E+07	7/12/02	76	17	1.96667	2.84E-14	7/16/02	19	21	0	0.00E+00	0.00%
E1024	7/11/02	8:06am	4:50pm	524	45	2.34E+07	7/12/02	38	17	0.7	1.10E-14	7/16/02	18	21	0	0.00E+00	0.00%
W1024	7/11/02	8:10am	4:50pm	520	43	2.22E+07	7/12/02	77	17	2	3.31E-14	7/16/02	17	21	0	0.00E+00	0.00%
N1025	7/12/02	8:02am	5:15pm	563	46	2.52E+07	7/15/02	21	17	0.13333	1.94E-15	7/16/02	16	21	0	0.00E+00	0.00%
S1025	7/12/02	8:06am	5:05pm	539	49	2.62E+07	7/15/02	19	17	0.06667	9.34E-16	7/16/02	17	21	0	0.00E+00	0.00%
E1025	7/12/02	8:03am	5:08pm	545	43	2.32E+07	7/15/02	16	17	0	0.00E+00	7/16/02	18	21	0	0.00E+00	0.00%
W1025	7/12/02	7:58am	5:12pm	554	49	2.69E+07	7/15/02	25	17	0.26667	3.63E-15	7/16/02	16	21	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor**Week #7 7/16/02-7/19/02****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/15/02	551	0.00E+00	0.00E+00	
7/16/02	476	0.00E+00	0.00E+00	
7/17/02	549	1.10E-15	6.04E-13	
7/18/02	473	0.00E+00	0.00E+00	
7/19/02	546	0.00E+00	0.00E+00	
2595		1.10E-15	6.04E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (North) = 2.33E-16 uCi/ml**Percentage of Release Limit of = 5.82%
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/15/02	548	8.86E-18	4.84E-13	
7/16/02	477	0.00E+00	0.00E+00	
7/17/02	541	0.00E+00	0.00E+00	
7/18/02	475	1.15E-15	5.46E-13	
7/19/02	536	0.00E+00	0.00E+00	
2575		2.04E-15	1.03E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (South) = 4.00E-16 uCi/ml**Percentage of Release Limit of = 10.00%
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/15/02	544	0.00E+00	0.00E+00	
7/16/02	478	0.00E+00	0.00E+00	
7/17/02	541	0.00E+00	0.00E+00	
7/18/02	477	0.00E+00	0.00E+00	
7/19/02	540	0.00E+00	0.00E+00	
2580		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (East) = 0.00E+00 uCi/ml**Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/15/02	551	0.00E+00	0.00E+00	
7/16/02	474	1.16E-15	5.50E-13	
7/17/02	549	0.00E+00	0.00E+00	
7/18/02	483	5.94E-16	2.87E-13	
7/19/02	546	0.00E+00	0.00E+00	
	2603	1.75E-15	8.37E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (West) = 3.21E-16 uCi/ml****Percentage of Release Limit of = 8.04%**

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 7

July 15, 2002 - July 19, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1028	7/15/02	8:08am	5:19pm	551	59	3.22E+07	7/16/02	110	21	2.96667	3.38E-14	7/19/02	16	17	0	0.00E+00	0.00%
S1026	7/15/02	8:06am	5:12pm	546	51	2.76E+07	7/16/02	209	21	6.26667	8.33E-14	7/19/02	19	17	0.067	8.88E-16	22.14%
E1026	7/15/02	8:10am	5:14pm	544	41	2.21E+07	7/16/02	115	21	3.13333	5.20E-14	7/19/02	17	17	0	0.00E+00	0.00%
W1026	7/15/02	8:04am	5:15pm	551	42	2.29E+07	7/16/02	183	21	5.4	8.63E-14	7/19/02	16	17	0	0.00E+00	0.00%
N1027	7/16/02	8:02am	3:58pm	476	53	2.50E+07	7/17/02	214	22	8.4	8.39E-14	7/22/02	18	18	0	0.00E+00	0.00%
S1027	7/16/02	8:03am	4:00pm	477	53	2.51E+07	7/17/02	188	22	4.86667	7.12E-14	7/22/02	17	18	0	0.00E+00	0.00%
E1027	7/16/02	8:05am	4:03pm	478	49	2.32E+07	7/17/02	157	22	4.5	7.11E-14	7/22/02	18	18	0	0.00E+00	0.00%
W1027	7/16/02	8:01am	3:55pm	474	45	2.11E+07	7/17/02	251	22	7.63333	1.32E-13	7/22/02	20	18	0.067	1.16E-15	28.91%
N1028	7/17/02	8:03am	5:12pm	549	41	2.23E+07	7/18/02	214	18	8.53333	1.07E-13	7/22/02	20	18	0.067	1.10E-15	27.39%
S1028	7/17/02	8:04am	5:05pm	541	48	2.57E+07	7/18/02	188	18	5	7.12E-14	7/22/02	18	18	0	0.00E+00	0.00%
E1028	7/17/02	8:08am	5:07pm	541	40	2.14E+07	7/18/02	157	18	4.63333	7.92E-14	7/22/02	18	18	0	0.00E+00	0.00%
W1028	7/17/02	8:01am	5:10pm	549	40	2.18E+07	7/18/02	251	18	7.76667	1.31E-13	7/22/02	16	18	0	0.00E+00	0.00%
N1029	7/18/02	8:02am	3:55pm	473	37	1.73E+07	7/19/02	220	17	6.76667	1.43E-13	7/23/02	15	17	0	0.00E+00	0.00%
S1029	7/18/02	8:00am	3:55pm	475	45	2.12E+07	7/19/02	225	17	8.93333	1.20E-13	7/23/02	19	17	0.067	1.15E-15	28.85%
E1029	7/18/02	7:59am	3:56pm	477	47	2.22E+07	7/19/02	191	17	5.8	8.57E-14	7/23/02	17	17	0	0.00E+00	0.00%
W1029	7/18/02	7:56am	3:59pm	483	43	2.06E+07	7/19/02	236	17	7.3	1.30E-13	7/23/02	18	17	0.033	5.94E-16	14.84%
N1030	7/19/02	8:04am	5:10pm	546	44	2.38E+07	7/22/02	24	18	0.2	3.08E-15	7/24/02	18	21	0	0.00E+00	0.00%
S1030	7/19/02	8:07am	5:03pm	538	43	2.28E+07	7/22/02	20	18	0.06667	1.07E-15	7/24/02	17	21	0	0.00E+00	0.00%
E1030	7/19/02	8:05am	5:05pm	540	44	2.35E+07	7/22/02	17	18	0	0.00E+00	7/24/02	19	21	0	0.00E+00	0.00%
W1030	7/19/02	8:02am	5:08pm	546	45	2.44E+07	7/22/02	23	18	0.16667	2.51E-15	7/24/02	18	21	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report **341 East Ohio Street Project- Chicago, IL**

North Monitor

Week #8 7/22/02-7/26/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/22/02	491	1.12E-15	5.50E-13	
7/23/02	485	0.00E+00	0.00E+00	
7/24/02	567	0.00E+00	0.00E+00	
7/25/02	562	0.00E+00	0.00E+00	
7/26/02	536	4.70E-16	2.52E-13	
2841		1.59E-15	8.02E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 3.04E-16 uCi/ml

Percentage of Release Limit of = 7.59%
 4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/22/02	482	0.00E+00	0.00E+00	
7/23/02	476	0.00E+00	0.00E+00	
7/24/02	561	0.00E+00	0.00E+00	
7/25/02	548	0.00E+00	0.00E+00	
7/26/02	531	1.24E-15	6.58E-13	
2598		1.24E-15	6.58E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 2.53E-16 uCi/ml

Percentage of Release Limit of = 6.34%
 4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/22/02	489	0.00E+00	0.00E+00	
7/23/02	483	0.00E+00	0.00E+00	
7/24/02	561	0.00E+00	0.00E+00	
7/25/02	554	0.00E+00	0.00E+00	
7/26/02	532	0.00E+00	0.00E+00	
2619		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
 4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/22/02	482	5.33E-16	2.57E-13	
7/23/02	476	5.51E-16	2.62E-13	
7/24/02	538	0.00E+00	0.00E+00	
7/25/02	559	0.00E+00	0.00E+00	
7/26/02	537	0.00E+00	0.00E+00	
	2590	1.08E-15	5.19E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 2.00E-16 uCi/ml

Percentage of Release Limit of = 5.01%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 8

July 22, 2002 - July 26, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1031	7/22/02	8:04am	4:15pm	491	45	2.19E+07	7/23/02	362	17	11.5	1.93E-13	7/26/02	23	21	0.067	1.12E-15	27.91%
S1031	7/22/02	8:08am	4:10pm	482	44	2.10E+07	7/23/02	337	17	10.6667	1.86E-13	7/26/02	20	21	0	0.00E+00	0.00%
E1031	7/22/02	8:06am	4:15pm	489	41	1.98E+07	7/23/02	339	17	10.7333	1.98E-13	7/26/02	21	21	0	0.00E+00	0.00%
W1031	7/22/02	8:10am	4:12pm	482	48	2.29E+07	7/23/02	281	17	9.13333	1.48E-13	7/26/02	22	21	0.033	5.33E-16	13.33%
N1032	7/23/02	7:55am	4:00pm	485	59	2.84E+07	7/24/02	23	21	0.06667	8.62E-16	7/29/02	18	21	0	0.00E+00	0.00%
S1032	7/23/02	7:59am	3:55pm	476	37	1.75E+07	7/24/02	25	21	0.13333	2.80E-15	7/29/02	17	21	0	0.00E+00	0.00%
E1032	7/23/02	7:57am	4:00pm	483	43	2.08E+07	7/24/02	31	21	0.33333	5.94E-15	7/29/02	16	21	0	0.00E+00	0.00%
W1032	7/23/02	8:08am	4:04pm	476	47	2.22E+07	7/24/02	27	21	0.2	3.31E-15	7/29/02	22	21	0.033	5.51E-16	13.78%
N1033	7/24/02	8:05am	5:32pm	567	51	2.87E+07	7/25/02	55	20	1.16667	1.49E-14	7/29/02	16	21	0	0.00E+00	0.00%
S1033	7/24/02	8:10am	5:31pm	561	43	2.39E+07	7/25/02	67	20	1.56667	2.40E-14	7/29/02	17	21	0	0.00E+00	0.00%
E1033	7/24/02	8:10am	5:31pm	561	40	2.22E+07	7/25/02	66	20	1.53333	2.53E-14	7/29/02	19	21	0	0.00E+00	0.00%
W1033	7/24/02	8:04am	5:00pm	536	49	2.60E+07	7/25/02	49	20	0.96667	1.36E-14	7/29/02	20	21	0	0.00E+00	0.00%
N1034	7/25/02	7:59am	5:21pm	562	43	2.39E+07	7/26/02	284	21	8.76667	1.34E-13	7/30/02	15	18	0	0.00E+00	0.00%
S1034	7/25/02	8:02am	5:10pm	548	51	2.77E+07	7/26/02	261	21	8	1.06E-13	7/30/02	18	18	0	0.00E+00	0.00%
E1034	7/25/02	8:01am	5:15pm	554	40	2.20E+07	7/26/02	203	21	6.06667	1.01E-13	7/30/02	18	18	0	0.00E+00	0.00%
W1034	7/25/02	7:58am	5:17pm	559	46	2.55E+07	7/26/02	210	21	6.3	9.06E-14	7/30/02	18	18	0	0.00E+00	0.00%
N1035	7/26/02	7:51am	4:47pm	536	49	2.60E+07	7/29/02	31	21	0.33333	4.70E-15	7/31/02	18	17	0.033	4.70E-16	11.74%
S1035	7/26/02	7:54am	4:45pm	531	56	2.95E+07	7/29/02	34	21	0.43333	5.39E-15	7/31/02	20	17	0.1	1.24E-15	31.10%
E1035	7/26/02	7:58am	4:50pm	532	41	2.16E+07	7/29/02	34	21	0.43333	7.35E-15	7/31/02	17	17	0	0.00E+00	0.00%
W1035	7/26/02	7:55am	4:52pm	537	46	2.55E+07	7/29/02	36	21	0.5	7.18E-15	7/31/02	18	17	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
 341 East Ohio Street Project- Chicago, IL

North Monitor

Week #9 7/29/02-8/2/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/29/02	570	4.18E-16	2.37E-13	
7/30/02	528	1.59E-15	8.40E-13	
7/31/02	543	0.00E+00	0.00E+00	
8/1/02	522	0.00E+00	0.00E+00	
8/2/02	580	0.00E+00	0.00E+00	
2723		2.01E-15	1.08E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 3.95E-16 uCi/ml

Percentage of Release Limit of = 9.88%
 4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/29/02	499	0.00E+00	0.00E+00	
7/30/02	554	8.09E-16	4.48E-13	
7/31/02	528	1.58E-15	8.24E-13	
8/1/02	513	1.14E-15	5.85E-13	
8/2/02	556	0.00E+00	0.00E+00	
2850		3.51E-15	1.88E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 7.01E-16 uCi/ml

Percentage of Release Limit of = 17.52%
 4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
7/29/02	579	1.21E-15	7.01E-13	
7/30/02	552	0.00E+00	0.00E+00	
7/31/02	533	0.00E+00	0.00E+00	
8/1/02	521	0.00E+00	0.00E+00	
8/2/02	559	0.00E+00	0.00E+00	
2744		1.21E-15	7.01E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 2.65E-16 uCi/ml

Percentage of Release Limit of = 6.38%
 4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCl/ml	Concentration x Sample Min / Day	Comments
7/29/02	543	0.00E+00	0.00E+00	
7/30/02	555	1.45E-15	8.05E-13	
7/31/02	543	5.16E-16	2.80E-13	
8/1/02	515	0.00E+00	0.00E+00	
8/2/02	565	0.00E+00	0.00E+00	
	2721	1.97E-15	1.08E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) =

3.99E-16 uCl/ml

Percentage of Release Limit of =

0.97%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 9

July 29, 2002 - August 2, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bgk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bgk counts	net cpm	Concentration in uCi/ml	
N1036	7/29/02	8:10am	5:40pm	570	52	2.94E+07	7/30/02	221	18	8.76667	8.45E-14	8/2/02	18	17	0.033	4.16E-16	10.40%
S1036	7/29/02	9:16am	5:35pm	499	62	3.07E+07	7/30/02	191	18	5.76667	6.90E-14	8/2/02	16	17	0	0.00E+00	0.00%
E1036	7/29/02	8:05am	5:44pm	579	53	3.04E+07	7/30/02	220	18	8.73333	8.12E-14	8/2/02	20	17	0.1	1.21E-15	30.14%
W1036	7/29/02	8:31am	5:34pm	543	55	2.98E+07	7/30/02	267	18	8.3	1.03E-13	8/2/02	16	17	0	0.00E+00	0.00%
N1037	7/30/02	8:07am	4:55pm	528	44	2.30E+07	7/31/02	82	17	2.16667	3.45E-14	8/5/02	22	19	0.1	1.58E-15	39.81%
S1037	7/30/02	8:10am	5:24pm	554	55	3.02E+07	7/31/02	75	17	1.93333	2.35E-14	8/5/02	21	19	0.067	8.08E-16	20.24%
E1037	7/30/02	8:08am	5:20pm	552	43	2.35E+07	7/31/02	49	17	1.06667	1.68E-14	8/5/02	18	19	0	0.00E+00	0.00%
W1037	7/30/02	8:03am	5:18pm	555	46	2.53E+07	7/31/02	72	17	1.83333	2.86E-14	8/5/02	22	19	0.1	1.45E-15	36.23%
N1038	7/31/02	8:10am	5:13pm	543	51	2.74E+07	8/1/02	183	16	5.56667	7.44E-14	8/5/02	17	19	0	0.00E+00	0.00%
S1038	7/31/02	8:17am	5:05pm	528	45	2.35E+07	8/1/02	185	16	5.63333	8.77E-14	8/5/02	22	19	0.1	1.58E-15	38.93%
E1038	7/31/02	8:15am	5:08pm	533	48	2.54E+07	8/1/02	216	16	8.66667	9.84E-14	8/5/02	18	19	0	0.00E+00	0.00%
W1038	7/31/02	8:06am	5:09pm	543	44	2.37E+07	8/1/02	255	18	7.96667	1.23E-13	8/5/02	20	19	0.033	5.16E-16	12.90%
N1039	8/1/02	7:58am	4:40pm	522	50	2.58E+07	8/2/02	160	17	4.76667	6.78E-14	8/8/02	20	22	0	0.00E+00	0.00%
S1039	8/1/02	8:02am	4:35pm	513	42	2.14E+07	8/2/02	155	17	4.8	7.90E-14	8/8/02	24	22	0.067	1.14E-15	28.82%
E1039	8/1/02	8:00am	4:41pm	521	44	2.27E+07	8/2/02	131	17	3.8	6.13E-14	8/8/02	18	22	0	0.00E+00	0.00%
W1039	8/1/02	8:05am	4:40pm	515	48	2.45E+07	8/2/02	206	17	6.3	9.43E-14	8/8/02	19	22	0	0.00E+00	0.00%
N1040	8/2/02	8:00am	5:20pm	560	47	2.61E+07	8/5/02	19	19	0	0.00E+00	8/7/02	18	20	0	0.00E+00	0.00%
S1040	8/2/02	8:02am	5:18pm	556	44	2.42E+07	8/5/02	22	19	0.1	1.51E-15	8/7/02	16	20	0	0.00E+00	0.00%
E1040	8/2/02	8:00am	5:19pm	559	39	2.16E+07	8/5/02	18	19	0	0.00E+00	8/7/02	18	20	0	0.00E+00	0.00%
W1040	8/2/02	8:00am	5:25pm	565	56	3.14E+07	8/5/02	28	18	0.3	3.51E-15	8/7/02	20	20	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
 341 East Ohio Street Project- Chicago, IL

North Monitor

Week #10 8/5/02-8/9/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/5/02	552	1.52E-15	8.39E-13	
8/6/02	542	0.00E+00	0.00E+00	
8/7/02	502	0.00E+00	0.00E+00	
8/8/02	566	0.00E+00	0.00E+00	
8/9/02	469	0.00E+00	0.00E+00	
2831		1.52E-15	8.39E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 3.19E-16 uCi/ml

Percentage of Release Limit of = 7.97%

4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/5/02	541	0.00E+00	0.00E+00	
8/6/02	551	0.00E+00	0.00E+00	
8/7/02	502	0.00E+00	0.00E+00	
8/8/02	566	0.00E+00	0.00E+00	
8/9/02	505	1.32E-15	6.67E-13	
2665		1.32E-15	6.67E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 2.50E-16 uCi/ml

Percentage of Release Limit of = 6.25%

4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/5/02	542	0.00E+00	0.00E+00	
8/6/02	551	0.00E+00	0.00E+00	
8/7/02	499	0.00E+00	0.00E+00	
8/8/02	564	1.82E-15	1.03E-12	
8/9/02	492	2.21E-15	1.09E-12	
2648		4.03E-15	2.11E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 7.98E-16 uCi/ml

Percentage of Release Limit of = 19.96%

4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/5/02	544	0.00E+00	0.00E+00	
8/6/02	533	4.21E-18	2.24E-13	
8/7/02	514	1.44E-15	7.40E-13	
8/8/02	573	8.15E-18	3.52E-13	
8/9/02	517	4.88E-18	2.42E-13	
	2881	2.84E-15	1.58E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	5.81E-16 uCi/ml
Percentage of Release Limit of =	14.54%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 10

August 5, 2002 - August 9, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	
N1041	8/5/02	8:08am	5:20pm	552	44	2.41E+07	8/8/02	41	22	0.83333	9.65E-15	8/9/02	21	18	0.1	1.52E-15	38.08%
B1041	8/5/02	8:15am	5:16pm	541	52	2.78E+07	8/8/02	40	22	0.6	7.89E-15	8/9/02	18	18	0	0.00E+00	0.00%
E1041	8/5/02	8:13am	5:15pm	542	42	2.28E+07	8/8/02	33	22	0.38867	5.96E-15	8/9/02	18	18	0	0.00E+00	0.00%
W1041	8/5/02	8:10am	5:14pm	544	42	2.28E+07	8/8/02	68	22	1.48867	2.37E-14	8/9/02	18	18	0	0.00E+00	0.00%
N1042	8/8/02	8:08am	5:10pm	542	48	2.58E+07	8/7/02	40	20	0.66867	9.48E-15	8/12/02	18	21	0	0.00E+00	0.00%
B1042	8/8/02	7:50am	5:01pm	551	44	2.40E+07	8/7/02	31	20	0.38867	5.80E-15	8/12/02	19	21	0	0.00E+00	0.00%
E1042	8/8/02	7:55am	5:08pm	551	43	2.95E+07	8/7/02	23	20	0.1	1.58E-15	8/12/02	18	21	0	0.00E+00	0.00%
W1042	8/8/02	8:12am	5:05pm	533	65	2.91E+07	8/7/02	27	20	0.23333	2.94E-15	8/12/02	22	21	0.033	4.21E-16	10.52%
N1043	8/7/02	7:53am	4:15pm	502	48	2.29E+07	8/8/02	35	19	0.53333	8.54E-15	8/12/02	18	21	0	0.00E+00	0.00%
B1043	8/7/02	7:58am	4:20pm	502	48	2.29E+07	8/8/02	30	19	0.38867	5.87E-15	8/12/02	20	21	0	0.00E+00	0.00%
E1043	8/7/02	7:56am	4:15pm	499	51	2.52E+07	8/8/02	22	19	0.1	1.45E-15	8/12/02	18	21	0	0.00E+00	0.00%
W1043	8/7/02	7:51am	4:25pm	514	50	2.55E+07	8/8/02	52	19	1.1	1.58E-14	8/12/02	24	21	0.1	1.44E-15	35.99%
N1044	8/8/02	7:59am	5:25pm	566	56	3.14E+07	8/8/02	79	18	2.03333	2.37E-14	8/13/02	17	17	0	0.00E+00	0.00%
B1044	8/8/02	8:04am	5:30pm	566	43	2.41E+07	8/9/02	50	18	1.08867	1.62E-14	8/13/02	18	17	0	0.00E+00	0.00%
E1044	8/8/02	8:01am	5:25pm	564	48	2.68E+07	8/9/02	40	18	0.73333	1.00E-14	8/13/02	21	17	0.133	1.82E-15	45.55%
W1044	8/8/02	7:56am	5:29pm	573	35	1.99E+07	8/9/02	64	18	1.53333	2.83E-14	8/13/02	18	17	0.033	6.15E-16	15.37%
N1045	8/9/02	8:01am	3:50pm	489	51	2.37E+07	8/12/02	22	21	0.03333	5.18E-16	8/14/02	18	18	0	0.00E+00	0.00%
B1045	8/9/02	8:05am	4:30pm	505	37	1.85E+07	8/12/02	20	21	0	0.00E+00	8/14/02	18	18	0.067	1.32E-15	33.00%
E1045	8/9/02	8:23am	4:35pm	492	34	1.68E+07	8/12/02	25	21	0.13333	2.85E-15	8/14/02	19	18	0.1	2.21E-15	55.29%
W1045	8/9/02	7:58am	4:35pm	617	51	2.81E+07	8/12/02	24	21	0.1	1.40E-15	8/14/02	17	18	0.033	4.68E-16	11.69%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor **Week #11 8/12/02-8/16/02** **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/12/02	564	0.00E+00	0.00E+00	
8/13/02	562	0.00E+00	0.00E+00	
8/14/02	560	0.00E+00	0.00E+00	
8/15/02	555	0.00E+00	0.00E+00	
8/16/02	488	0.00E+00	0.00E+00	
2729		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/12/02	560	0.00E+00	0.00E+00	
8/13/02	555	1.48E-15	8.21E-13	
8/14/02	558	0.00E+00	0.00E+00	
8/15/02	552	0.00E+00	0.00E+00	
8/16/02	487	0.00E+00	0.00E+00	
2712		1.48E-15	8.21E-13	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 3.03E-16 uCi/ml

Percentage of Release Limit of = 7.57%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/12/02	564	0.00E+00	0.00E+00	
8/13/02	558	0.00E+00	0.00E+00	
8/14/02	563	0.00E+00	0.00E+00	
8/15/02	553	0.00E+00	0.00E+00	
8/16/02	482	1.35E-15	6.51E-13	
2720		1.35E-15	6.51E-13	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 2.39E-16 uCi/ml

Percentage of Release Limit of = 5.98%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/12/02	564	9.11E-16	5.14E-13	
8/13/02	562	1.32E-15	7.42E-13	
8/14/02	564	0.00E+00	0.00E+00	
8/15/02	553	0.00E+00	0.00E+00	
8/16/02	489	0.00E+00	0.00E+00	
2732		2.23E-15	1.26E-12	

$$C_{avg} = \frac{\sum T_s C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 4.60E-16 uCi/ml

Percentage of Release Limit of = 11.49%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 11

August 12, 2002 - August 16, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1046	8/12/02	8:03am	5:27pm	564	41	2.29E+07	8/13/02	472	17	15.1667	2.43E-13	8/16/02	20	20	0	0.00E+00	0.00%
S1046	8/12/02	8:05am	5:25pm	560	45	2.50E+07	8/13/02	353	17	11.2	1.64E-13	8/16/02	16	20	0	0.00E+00	0.00%
E1046	8/12/02	8:04am	5:28pm	564	44	2.46E+07	8/13/02	277	17	8.66667	1.29E-13	8/16/02	20	20	0	0.00E+00	0.00%
W1046	8/12/02	8:01am	5:25pm	564	48	2.68E+07	8/13/02	450	17	14.4333	1.97E-13	8/16/02	22	20	0.067	9.11E-16	22.78%
N1047	8/13/02	8:03am	5:25pm	562	43	2.39E+07	8/14/02	286	16	9	1.38E-13	8/19/02	16	18	0	0.00E+00	0.00%
S1047	8/13/02	8:10am	5:25pm	555	30	1.65E+07	8/14/02	234	16	7.26667	1.61E-13	8/19/02	20	18	0.067	1.48E-15	37.03%
E1047	8/13/02	8:12am	5:30pm	558	40	2.21E+07	8/14/02	218	16	6.73333	1.12E-13	8/19/02	18	18	0	0.00E+00	0.00%
W1047	8/13/02	8:05am	5:27pm	562	50	2.78E+07	8/14/02	219	16	6.76667	8.91E-14	8/19/02	21	18	0.1	1.32E-15	32.92%
N1048	8/14/02	8:00am	5:20pm	560	46	2.55E+07	8/15/02	107	22	2.83333	4.07E-14	8/19/02	17	18	0	0.00E+00	0.00%
S1048	8/14/02	8:10am	5:28pm	558	47	2.60E+07	8/15/02	99	22	2.56667	3.62E-14	8/19/02	15	18	0	0.00E+00	0.00%
E1048	8/14/02	8:02am	5:25pm	563	50	2.79E+07	8/15/02	106	22	2.8	3.68E-14	8/19/02	18	18	0	0.00E+00	0.00%
W1048	8/14/02	8:00am	5:24pm	564	53	2.96E+07	8/15/02	84	22	2.06667	2.56E-14	8/19/02	17	18	0	0.00E+00	0.00%
N1049	8/15/02	8:00am	5:15pm	555	52	2.86E+07	8/16/02	237	20	7.23333	9.27E-14	8/20/02	18	19	0	0.00E+00	0.00%
S1049	8/15/02	8:03am	5:15pm	552	47	2.57E+07	8/16/02	99	20	2.63333	3.76E-14	8/20/02	16	19	0	0.00E+00	0.00%
E1049	8/15/02	8:02am	5:15pm	553	35	1.92E+07	8/16/02	194	20	5.8	1.11E-13	8/20/02	18	19	0	0.00E+00	0.00%
W1049	8/15/02	8:02am	5:15pm	553	52	2.85E+07	8/16/02	198	20	5.93333	7.63E-14	8/20/02	19	19	0	0.00E+00	0.00%
N1050	8/16/02	7:59am	4:07pm	488	45	2.18E+07	8/19/02	16	18	0	0.00E+00	8/21/02	17	18	0	0.00E+00	0.00%
S1050	8/16/02	8:00am	4:07pm	487	38	1.83E+07	8/19/02	21	18	0.1	2.00E-15	8/21/02	18	18	0	0.00E+00	0.00%
E1050	8/16/02	8:03am	4:05pm	482	38	1.82E+07	8/19/02	18	18	0	0.00E+00	8/21/02	20	18	0.067	1.35E-15	33.67%
W1050	8/16/02	8:00am	4:09pm	489	47	2.28E+07	8/19/02	20	18	0.06667	1.07E-15	8/21/02	17	18	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor**Week #12 8/19/02-8/23/02****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/19/02	457	0.00E+00	0.00E+00	short work day due to rain
8/20/02	555	0.00E+00	0.00E+00	
8/21/02	550	5.90E-16	3.25E-13	
8/22/02	232	1.27E-15	2.95E-13	
8/23/02	495	0.00E+00	0.00E+00	
2289		1.86E-15	6.19E-13	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (North) = 2.70E-16 uCi/ml**Percentage of Release Limit of = 6.76%
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/19/02	470	1.25E-14	5.88E-12	short work day due to rain
8/20/02	550	0.00E+00	0.00E+00	
8/21/02	549	0.00E+00	0.00E+00	
8/22/02	228	0.00E+00	0.00E+00	
8/23/02	473	0.00E+00	0.00E+00	
2270		1.25E-14	5.88E-12	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (South) = 2.69E-15 uCi/ml**Percentage of Release Limit of = 64.70%
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/19/02	455	1.73E-15	7.87E-13	short work day due to rain
8/20/02	549	0.00E+00	0.00E+00	
8/21/02	552	9.71E-16	5.36E-13	
8/22/02	225	2.15E-15	4.84E-13	
8/23/02	486	0.00E+00	0.00E+00	
2267		4.85E-15	1.81E-12	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (East) = 7.97E-16 uCi/ml**Percentage of Release Limit of = 19.93%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/19/02	484	0.00E+00	0.00E+00	short work day due to rain
8/20/02	570	0.00E+00	0.00E+00	
8/21/02	557	0.00E+00	0.00E+00	
8/22/02	237	0.00E+00	0.00E+00	
8/23/02	484	0.00E+00	0.00E+00	
	2322	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 12

August 19, 2002 - August 23, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1051	8/19/02	8:43am	4:20pm	457	45	2.04E+07	8/20/02	88	19	2.3	4.14E-14	8/23/02	18	18	0	0.00E+00	0.00%
S1051	8/19/02	8:45am	4:35pm	470	42	1.96E+07	8/20/02	58	19	1.3	2.44E-14	8/23/02	20	18	0.067	1.25E-15	31.24%
E1051	8/19/02	8:50am	4:25pm	455	47	2.12E+07	8/20/02	74	19	1.83333	3.17E-14	8/23/02	21	18	0.1	1.73E-15	43.25%
W1051	8/19/02	8:46am	4:30pm	464	52	2.39E+07	8/20/02	98	19	2.63333	4.04E-14	8/23/02	17	18	0	0.00E+00	0.00%
N1052	8/20/02	8:08am	5:21pm	555	43	2.37E+07	8/21/02	67	18	1.63333	2.53E-14	8/26/02	19	19	0	0.00E+00	0.00%
S1052	8/20/02	8:10am	5:20pm	550	35	1.91E+07	8/21/02	44	18	0.86667	1.67E-14	8/26/02	18	19	0	0.00E+00	0.00%
E1052	8/20/02	8:07am	5:16pm	549	40	2.18E+07	8/21/02	52	18	1.13333	1.91E-14	8/26/02	17	19	0	0.00E+00	0.00%
W1052	8/20/02	8:05am	5:35pm	570	50	2.82E+07	8/21/02	50	18	1.06667	1.38E-14	8/26/02	18	19	0	0.00E+00	0.00%
N1053	8/21/02	8:00am	5:10pm	550	38	2.07E+07	8/22/02	387	20	12.2333	2.17E-13	8/26/02	20	19	0.033	5.90E-16	14.75%
S1053	8/21/02	8:01am	5:10pm	549	44	2.39E+07	8/22/02	304	20	9.46667	1.45E-13	8/26/02	17	19	0	0.00E+00	0.00%
E1053	8/21/02	8:03am	5:15pm	552	46	2.52E+07	8/22/02	274	20	8.46667	1.23E-13	8/26/02	21	19	0.067	9.71E-16	24.28%
W1053	8/21/02	7:58am	5:15pm	557	52	2.87E+07	8/22/02	344	20	10.8	1.38E-13	8/26/02	19	19	0	0.00E+00	0.00%
N1054	8/22/02	12:31pm	4:23pm	232	42	8.66E+06	8/23/02	77	18	1.96667	7.47E-14	8/27/02	18	17	0.033	1.27E-15	31.64%
S1054	8/22/02	12:37pm	4:25pm	228	43	9.72E+06	8/23/02	78	18	2	7.55E-14	8/27/02	17	17	0	0.00E+00	0.00%
E1054	8/22/02	12:35pm	4:20pm	225	51	1.14E+07	8/23/02	72	18	1.8	5.80E-14	8/27/02	19	17	0.067	2.15E-15	53.74%
W1054	8/22/02	12:28pm	4:25pm	237	49	1.15E+07	8/23/02	74	18	1.86667	5.95E-14	8/27/02	15	17	0	0.00E+00	0.00%
N1055	8/23/02	7:57am	4:12pm	495	48	2.35E+07	8/26/02	17	19	0	0.00E+00	8/28/02	16	19	0	0.00E+00	0.00%
S1055	8/23/02	8:07am	4:00pm	473	52	2.44E+07	8/26/02	18	19	0	0.00E+00	8/28/02	18	19	0	0.00E+00	0.00%
E1055	8/23/02	7:59am	4:05pm	486	48	2.31E+07	8/26/02	22	19	0.1	1.59E-15	8/28/02	19	19	0	0.00E+00	0.00%
W1055	8/23/02	7:56am	4:10pm	494	41	2.01E+07	8/26/02	18	19	0	0.00E+00	8/28/02	17	19	0	0.00E+00	0.00%

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Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
341 East Ohio Street Project- Chicago, IL

North Monitor

Week #13 8/26/02-8/30/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/26/02	545	0.00E+00	0.00E+00	
8/27/02	508	0.00E+00	0.00E+00	
8/28/02	530	0.00E+00	0.00E+00	
8/29/02	509	0.00E+00	0.00E+00	
8/30/02	487	0.00E+00	0.00E+00	
2559		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/26/02	549	0.00E+00	0.00E+00	
8/27/02	515	4.70E-18	2.42E-13	
8/28/02	529	1.01E-15	5.34E-13	
8/29/02	500	2.00E-15	1.00E-12	
8/30/02	487	0.00E+00	0.00E+00	
2580		3.48E-15	1.78E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 6.94E-16 uCi/ml

Percentage of Release Limit of = 17.35%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/26/02	553	1.08E-15	5.88E-13	
8/27/02	505	0.00E+00	0.00E+00	
8/28/02	532	0.00E+00	0.00E+00	
8/29/02	498	0.00E+00	0.00E+00	
8/30/02	475	0.00E+00	0.00E+00	
2583		1.08E-15	5.88E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 2.29E-16 uCi/ml

Percentage of Release Limit of = 5.72%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/26/02	554	0.00E+00	0.00E+00	
8/27/02	512	6.34E-18	3.25E-13	
8/28/02	532	0.00E+00	0.00E+00	
8/29/02	497	0.00E+00	0.00E+00	
8/30/02	469	1.17E-15	5.49E-13	
	2564	1.80E-15	8.73E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	3.41E-16 uCi/ml
Percentage of Release Limit of =	8.52%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 13

August 26, 2002 - August 30, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1056	8/26/02	8:07am	5:12pm	545	51	2.75E+07	8/27/02	37	17	0.66667	8.87E-15	8/30/02	17	18	0	0.00E+00	0.00%
S1056	8/26/02	8:06am	5:15pm	549	40	2.18E+07	8/27/02	23	17	0.2	3.37E-15	8/30/02	18	18	0	0.00E+00	0.00%
E1056	8/26/02	8:02am	5:15pm	553	42	2.30E+07	8/27/02	28	17	0.36667	5.84E-15	8/30/02	20	18	0.067	1.06E-15	26.55%
W1056	8/26/02	8:03am	5:17pm	554	41	2.25E+07	8/27/02	29	17	0.4	6.52E-15	8/30/02	16	18	0	0.00E+00	0.00%
N1057	8/27/02	8:00am	4:28pm	508	47	2.37E+07	8/28/02	81	19	2.06667	3.20E-14	9/3/02	19	19	0	0.00E+00	0.00%
S1057	8/27/02	8:01am	4:36pm	515	51	2.60E+07	8/28/02	76	19	1.9	2.68E-14	9/3/02	20	19	0.033	4.70E-16	11.74%
E1057	8/27/02	8:04am	4:29pm	505	48	2.40E+07	8/28/02	74	19	1.83333	2.80E-14	9/3/02	18	19	0	0.00E+00	0.00%
W1057	8/27/02	7:59am	4:31pm	512	38	1.93E+07	8/28/02	74	19	1.83333	3.49E-14	9/3/02	20	19	0.033	6.34E-16	15.85%
N1058	8/28/02	8:00am	4:50pm	530	48	2.52E+07	8/29/02	89	17	2.4	3.49E-14	9/3/02	18	19	0	0.00E+00	0.00%
S1058	8/28/02	8:06am	4:55pm	529	46	2.41E+07	8/29/02	70	17	1.76667	2.69E-14	9/3/02	21	19	0.067	1.01E-15	25.34%
E1058	8/28/02	8:00am	4:52pm	532	49	2.58E+07	8/29/02	54	17	1.23333	1.75E-14	9/3/02	17	19	0	0.00E+00	0.00%
W1058	8/28/02	8:04am	4:56pm	532	37	1.95E+07	8/29/02	63	17	1.53333	2.88E-14	9/3/02	17	19	0	0.00E+00	0.00%
N1059	8/29/02	8:06am	4:35pm	509	53	2.67E+07	8/30/02	135	18	3.9	5.35E-14	9/3/02	18	19	0	0.00E+00	0.00%
S1059	8/29/02	8:10am	4:30pm	500	37	1.83E+07	8/30/02	243	18	7.5	1.50E-13	9/3/02	22	19	0.1	2.00E-15	50.00%
E1059	8/29/02	8:07am	4:25pm	498	50	2.47E+07	8/30/02	98	18	2.66667	3.96E-14	9/3/02	18	19	0	0.00E+00	0.00%
W1059	8/29/02	8:11am	4:28pm	497	40	1.97E+07	8/30/02	107	18	2.96667	5.52E-14	9/3/02	19	19	0	0.00E+00	0.00%
N1060	8/30/02	8:00am	3:47pm	467	43	1.89E+07	9/3/02	18	19	0	0.00E+00	9/4/02	17	18	0	0.00E+00	0.00%
S1060	8/30/02	8:03am	3:50pm	467	40	1.85E+07	9/3/02	20	19	0.03333	6.60E-16	9/4/02	18	18	0	0.00E+00	0.00%
E1060	8/30/02	8:00am	3:55pm	475	42	1.98E+07	9/3/02	16	19	0	0.00E+00	9/4/02	18	18	0	0.00E+00	0.00%
W1060	8/30/02	8:05am	3:54pm	489	45	2.09E+07	9/3/02	19	19	0	0.00E+00	9/4/02	20	18	0.087	1.17E-15	29.22%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report **341 East Ohio Street Project- Chicago, IL**

North Monitor**Week #14 9/2/02-9/6/02****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/2/02	0	0.00E+00	0.00E+00	
9/3/02	562	0.00E+00	0.00E+00	
9/4/02	532	5.15E-16	2.74E-13	
9/5/02	582	0.00E+00	0.00E+00	
9/6/02	454	0.00E+00	0.00E+00	
	2130	5.15E-16	2.74E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (North) = 1.29E-16 uCi/ml**

Percentage of Release Limit of = 3.22%
 4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/2/02	0	0.00E+00	0.00E+00	
9/3/02	555	1.55E-15	8.60E-13	
9/4/02	532	0.00E+00	0.00E+00	
9/5/02	568	9.44E-16	5.36E-13	
9/6/02	473	0.00E+00	0.00E+00	
	2128	2.49E-15	1.40E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (South) = 6.66E-16 uCi/ml**

Percentage of Release Limit of = 16.41%
 4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/2/02	0	0.00E+00	0.00E+00	
9/3/02	545	4.53E-16	2.47E-13	
9/4/02	527	9.98E-16	5.25E-13	
9/5/02	568	0.00E+00	0.00E+00	
9/6/02	464	0.00E+00	0.00E+00	
	2104	1.45E-15	7.72E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (East) = 3.67E-16 uCi/ml**

Percentage of Release Limit of = 9.17%
 4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/2/02	0	0.00E+00	0.00E+00	
9/3/02	547	0.00E+00	0.00E+00	
9/4/02	527	0.00E+00	0.00E+00	
9/5/02	572	0.00E+00	0.00E+00	
9/6/02	468	1.35E-15	6.32E-13	
	2114	1.35E-15	6.32E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 2.99E-16 uCi/ml

Percentage of Release Limit of = 7.47%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 14

September 2, 2002 - September 6, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4,00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
NO WORK ON 9/2/02 - Labor Day Holiday																	
N1061	9/3/02	8:05am	5:27pm	562	41	2.28E+07	9/4/02	58	18	1.33333	2.14E-14	9/9/02	15	16	0	0.00E+00	0.00%
S1061	9/3/02	8:05am	5:20pm	555	43	2.37E+07	9/4/02	78	18	2	3.10E-14	9/9/02	19	16	0.1	1.55E-15	38.78%
E1061	9/3/02	8:05am	5:10pm	545	50	2.70E+07	9/4/02	71	18	1.76667	2.40E-14	9/9/02	17	16	0.033	4.53E-16	11.31%
W1061	9/3/02	8:08am	5:15pm	547	48	2.60E+07	9/4/02	49	18	1.03333	1.46E-14	9/9/02	16	16	0	0.00E+00	0.00%
N1062	9/4/02	8:03am	4:55pm	532	45	2.37E+07	9/5/02	97	19	2.6	4.02E-14	9/9/02	17	16	0.033	5.15E-16	12.88%
S1062	9/4/02	8:13am	5:05pm	532	37	1.95E+07	9/5/02	84	19	2.16667	4.07E-14	9/9/02	16	16	0	0.00E+00	0.00%
E1062	9/4/02	8:09am	4:56pm	527	47	2.45E+07	9/5/02	61	19	1.4	2.09E-14	9/9/02	18	16	0.067	9.96E-16	24.90%
W1062	9/4/02	8:13pm	5:00pm	527	45	2.35E+07	9/5/02	107	19	2.93333	4.58E-14	9/9/02	16	16	0	0.00E+00	0.00%
N1063	9/5/02	8:01am	5:43pm	582	50	2.68E+07	9/8/02	83	17	2.2	2.80E-14	9/10/02	17	17	0	0.00E+00	0.00%
S1063	9/5/02	8:07am	5:35pm	568	46	2.59E+07	9/8/02	79	17	2.06667	2.93E-14	9/10/02	19	17	0.067	9.44E-16	23.60%
E1063	9/5/02	8:03am	5:31pm	568	47	2.65E+07	9/8/02	67	17	1.66667	2.31E-14	9/10/02	17	17	0	0.00E+00	0.00%
W1063	9/5/02	8:05am	5:37pm	572	38	2.15E+07	9/8/02	92	17	2.5	4.26E-14	9/10/02	16	17	0	0.00E+00	0.00%
N1064	9/6/02	8:21am	3:55pm	454	41	1.84E+07	9/9/02	24	16	0.26667	5.30E-15	9/11/02	17	17	0	0.00E+00	0.00%
S1064	9/6/02	8:09am	4:02pm	473	37	1.73E+07	9/9/02	30	16	0.46667	9.97E-15	9/11/02	16	17	0	0.00E+00	0.00%
E1064	9/6/02	8:16am	4:00pm	464	43	1.68E+07	9/9/02	19	16	0.1	1.85E-15	9/11/02	17	17	0	0.00E+00	0.00%
W1064	9/6/02	8:09am	3:57pm	468	39	1.81E+07	9/9/02	28	16	0.4	8.11E-15	9/11/02	19	17	0.067	1.35E-15	33.78%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor **Week #15 9/9/02-9/13/02** **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/9/02	507	1.11E-15	5.63E-13	
9/10/02	443	1.11E-15	4.92E-13	
9/11/02	505	0.00E+00	0.00E+00	
9/12/02	553	0.00E+00	0.00E+00	
9/13/02	520	0.00E+00	0.00E+00	
2528		2.22E-15	1.05E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 4.17E-16 uCi/ml

Percentage of Release Limit of = 10.43%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/9/02	507	0.00E+00	0.00E+00	
9/10/02	427	0.00E+00	0.00E+00	
9/11/02	499	0.00E+00	0.00E+00	
9/12/02	552	0.00E+00	0.00E+00	
9/13/02	515	0.00E+00	0.00E+00	
2500		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/9/02	512	0.00E+00	0.00E+00	
9/10/02	457	1.38E-15	6.31E-13	
9/11/02	491	5.02E-16	2.46E-13	
9/12/02	554	1.19E-15	6.59E-13	
9/13/02	516	0.00E+00	0.00E+00	
2530		3.07E-15	1.54E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 6.07E-16 uCi/ml

Percentage of Release Limit of = 15.18%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/9/02	513	0.00E+00	0.00E+00	
9/10/02	455	0.00E+00	0.00E+00	
9/11/02	494	0.00E+00	0.00E+00	
9/12/02	549	8.64E-16	4.74E-13	
9/13/02	516	0.00E+00	0.00E+00	
2527		8.64E-16	4.74E-13	

$$C_{avg} = \frac{\sum T_s C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 1.88E-16 uCi/ml

Percentage of Release Limit of = 4.69%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 15

September 9, 2002 - September 13, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1065	9/9/02	7:58am	4:25pm	507	44	2.21E+07	9/10/02	152	17	4.5	7.46E-14	9/13/02	19	17	0.067	1.11E-15	27.64%
S1065	9/9/02	8:08am	4:35pm	507	40	2.01E+07	9/10/02	126	17	3.63333	6.63E-14	9/13/02	17	17	0	0.00E+00	0.00%
E1065	9/9/02	8:00am	4:32pm	512	47	2.38E+07	9/10/02	135	17	3.93333	6.05E-14	9/13/02	15	17	0	0.00E+00	0.00%
W1065	9/9/02	8:04am	4:37pm	513	36	1.83E+07	9/10/02	125	17	3.6	7.21E-14	9/13/02	17	17	0	0.00E+00	0.00%
N1066	9/10/02	8:12am	3:35pm	443	50	2.20E+07	9/11/02	188	17	5.7	9.52E-14	9/16/02	20	18	0.067	1.11E-15	27.84%
S1066	9/10/02	8:35am	3:42pm	427	41	1.74E+07	9/11/02	199	17	6.06667	1.28E-13	9/16/02	18	18	0	0.00E+00	0.00%
E1066	9/10/02	8:03am	3:40pm	457	39	1.77E+07	9/11/02	267	17	8.33333	1.73E-13	9/16/02	20	18	0.067	1.38E-15	34.60%
W1066	9/10/02	8:10am	3:45pm	455	46	2.07E+07	9/11/02	165	17	4.93333	8.72E-14	9/16/02	17	18	0	0.00E+00	0.00%
N1067	9/11/02	8:00am	4:25pm	505	50	2.50E+07	9/12/02	70	19	1.7	2.49E-14	9/16/02	16	18	0	0.00E+00	0.00%
S1067	9/11/02	8:00am	4:19pm	499	48	2.37E+07	9/12/02	64	19	1.5	2.32E-14	9/16/02	15	18	0	0.00E+00	0.00%
E1067	9/11/02	8:10am	4:21pm	491	50	2.43E+07	9/12/02	100	19	2.7	4.07E-14	9/16/02	19	18	0.033	5.02E-16	12.56%
W1067	9/11/02	8:03am	4:17pm	494	48	2.35E+07	9/12/02	65	19	1.53333	2.39E-14	9/16/02	17	18	0	0.00E+00	0.00%
N1068	9/12/02	8:04am	5:17pm	553	35	1.92E+07	9/13/02	70	17	1.76667	3.38E-14	9/17/02	15	16	0	0.00E+00	0.00%
S1068	9/12/02	8:09am	5:21pm	552	50	2.74E+07	9/13/02	59	17	1.4	1.88E-14	9/17/02	16	16	0	0.00E+00	0.00%
E1068	9/12/02	8:06am	5:20pm	554	56	3.07E+07	9/13/02	67	17	1.66667	1.99E-14	9/17/02	19	16	0.1	1.19E-15	29.81%
W1068	9/12/02	8:11am	5:20pm	549	52	2.83E+07	9/13/02	57	17	1.33333	1.73E-14	9/17/02	18	16	0.067	8.64E-16	21.60%
N1069	9/13/02	8:03am	4:43pm	520	39	2.01E+07	9/16/02	21	18	0.1	1.82E-15	9/18/02	16	18	0	0.00E+00	0.00%
S1069	9/13/02	8:07am	4:42pm	515	40	2.04E+07	9/16/02	22	18	0.13333	2.39E-15	9/18/02	18	18	0	0.00E+00	0.00%
E1069	9/13/02	8:05am	4:41pm	516	43	2.20E+07	9/16/02	16	18	0	0.00E+00	9/18/02	18	18	0	0.00E+00	0.00%
W1069	9/13/02	8:08am	4:44pm	516	42	2.15E+07	9/16/02	18	18	0	0.00E+00	9/18/02	15	18	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
341 East Ohio Street Project- Chicago, IL

North Monitor

Week #16 9/16/02-9/20/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/16/02	562	6.65E-16	3.74E-13	
9/17/02	577	0.00E+00	0.00E+00	
9/18/02	576	0.00E+00	0.00E+00	
9/19/02	563	1.04E-15	5.86E-13	
9/20/02	221	1.24E-15	2.74E-13	Rain Delayed
	2499	2.95E-15	1.23E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 4.94E-16 uCi/ml

Percentage of Release Limit of = 12.34%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/16/02	555	0.00E+00	0.00E+00	
9/17/02	529	0.00E+00	0.00E+00	
9/18/02	580	4.09E-16	2.37E-13	
9/19/02	573	1.54E-15	8.82E-13	
9/20/02	210	0.00E+00	0.00E+00	Rain Delayed
	2447	1.95E-15	1.12E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 4.58E-16 uCi/ml

Percentage of Release Limit of = 11.44%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/16/02	564	9.11E-16	5.14E-13	
9/17/02	568	4.82E-16	2.74E-13	
9/18/02	576	0.00E+00	0.00E+00	
9/19/02	561	0.00E+00	0.00E+00	
9/20/02	218	0.00E+00	0.00E+00	Rain Delayed
	2487	1.39E-15	7.88E-13	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 3.17E-16 uCi/ml

Percentage of Release Limit of = 7.92%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/16/02	563	0.00E+00	0.00E+00	
9/17/02	529	1.26E-15	6.67E-13	
9/18/02	573	0.00E+00	0.00E+00	
9/19/02	590	4.98E-16	2.94E-13	
9/20/02	212	0.00E+00	0.00E+00	Rain Delayed
2467		1.76E-15	9.60E-13	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	3.89E-16 uCi/ml
Percentage of Release Limit of =	9.73%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 16

September 16, 2002 - September 20, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1070	9/16/02	8:13am	5:35pm	562	33	1.84E+07	9/17/02	58	16	1.4	2.79E-14	9/20/02	21	20	0.033	6.65E-16	16.62%
S1070	9/16/02	8:15am	5:30pm	555	42	2.31E+07	9/17/02	38	16	0.73333	1.16E-14	9/20/02	16	20	0	0.00E+00	0.00%
E1070	9/16/02	8:07am	5:31pm	564	48	2.68E+07	9/17/02	55	16	1.3	1.78E-14	9/20/02	22	20	0.067	9.11E-16	22.78%
W1070	9/16/02	8:11am	5:34pm	563	42	2.34E+07	9/17/02	56	16	1.33333	2.09E-14	9/20/02	20	20	0	0.00E+00	0.00%
N1071	9/17/02	8:13am	5:50pm	577	37	2.12E+07	9/18/02	191	18	5.76667	9.99E-14	9/23/02	18	18	0	0.00E+00	0.00%
S1071	9/17/02	8:11am	5:00pm	529	40	2.10E+07	9/18/02	206	18	6.26667	1.10E-13	9/23/02	18	18	0	0.00E+00	0.00%
E1071	9/17/02	8:07am	5:35pm	568	45	2.53E+07	9/18/02	184	18	5.53333	8.01E-14	9/23/02	19	18	0.033	4.82E-16	12.06%
W1071	9/17/02	8:13am	5:02pm	529	37	1.94E+07	9/18/02	181	18	5.43333	1.03E-13	9/23/02	20	18	0.067	1.26E-15	31.50%
N1072	9/18/02	8:15am	5:51pm	576	37	2.11E+07	9/19/02	235	17	7.26667	1.26E-13	9/23/02	17	18	0	0.00E+00	0.00%
S1072	9/18/02	8:05am	5:45pm	580	52	2.99E+07	9/19/02	182	17	5.5	6.75E-14	9/23/02	19	18	0.033	4.09E-16	10.22%
E1072	9/18/02	8:14am	5:50pm	576	46	2.63E+07	9/19/02	233	17	7.2	1.01E-13	9/23/02	15	18	0	0.00E+00	0.00%
W1072	9/18/02	8:07am	5:40pm	573	51	2.90E+07	9/19/02	130	17	3.76667	4.77E-14	9/23/02	18	18	0	0.00E+00	0.00%
N1073	9/19/02	8:22am	5:45pm	563	42	2.34E+07	9/20/02	157	20	4.56667	7.15E-14	9/24/02	18	16	0.067	1.04E-15	26.08%
S1073	9/19/02	8:10am	5:43pm	573	42	2.39E+07	9/20/02	186	20	5.53333	8.51E-14	9/24/02	19	16	0.1	1.54E-15	38.43%
E1073	9/19/02	8:20am	5:41pm	561	39	2.17E+07	9/20/02	183	20	5.43333	9.19E-14	9/24/02	14	16	0	0.00E+00	0.00%
W1073	9/19/02	8:15am	6:05pm	590	42	2.46E+07	9/20/02	134	20	3.8	5.67E-14	9/24/02	17	16	0.033	4.98E-16	12.44%
N1074	9/20/02	8:01am	2:12pm	221	45	9.86E+06	9/23/02	24	18	0.2	7.44E-15	9/25/02	18	17	0.033	1.24E-15	31.00%
S1074	9/20/02	8:05am	2:05pm	210	56	1.17E+07	9/23/02	21	18	0.1	3.15E-15	9/25/02	15	17	0	0.00E+00	0.00%
E1074	9/20/02	8:02am	2:10pm	218	52	1.12E+07	9/23/02	18	18	0	0.00E+00	9/25/02	17	17	0	0.00E+00	0.00%
W1074	9/20/02	7:58am	2:00pm	212	57	1.20E+07	9/23/02	18	18	0	0.00E+00	9/25/02	17	17	0	0.00E+00	0.00%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

341 East Ohio Street Project- Chicago, IL

North Monitor

Week #17 9/23/02-9/27/02

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/23/02	568	0.00E+00	0.00E+00	
9/24/02	499	5.04E-16	2.51E-13	
9/25/02	495	0.00E+00	0.00E+00	
9/26/02	517	0.00E+00	0.00E+00	
9/27/02	475	0.00E+00	0.00E+00	
	2554	5.04E-16	2.51E-13	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 9.85E-17 uCi/ml

Percentage of Release Limit of = 2.46%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/23/02	591	9.71E-16	5.74E-13	
9/24/02	488	9.91E-16	4.84E-13	
9/25/02	491	4.19E-16	2.06E-13	
9/26/02	495	6.23E-16	3.08E-13	
9/27/02	492	0.00E+00	0.00E+00	
	2557	3.00E-15	1.57E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 6.15E-16 uCi/ml

Percentage of Release Limit of = 15.37%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/23/02	568	0.00E+00	0.00E+00	
9/24/02	482	0.00E+00	0.00E+00	
9/25/02	497	0.00E+00	0.00E+00	
9/26/02	491	1.57E-15	7.71E-13	
9/27/02	470	6.91E-16	3.25E-13	
	2508	2.26E-15	1.10E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 4.37E-16 uCi/ml

Percentage of Release Limit of = 10.92%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/23/02	589	0.00E+00	0.00E+00	
9/24/02	503	0.00E+00	0.00E+00	
9/25/02	485	1.86E-15	9.02E-13	
9/26/02	511	0.00E+00	0.00E+00	
9/27/02	485	1.59E-15	7.71E-13	
2573		3.45E-15	1.67E-12	

$$C_{avg} = \frac{\sum T_s \cdot C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 6.50E-16 uCi/ml

Percentage of Release Limit of = 16.26%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 17

September 23, 2002 - September 27, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1075	9/23/02	8:20am	5:48pm	568	52	2.93E+07	9/24/02	67	16	1.7	2.13E-14	9/27/02	17	17	0	0.00E+00	0.00%
S1075	9/23/02	7:58am	5:49pm	591	43	2.52E+07	9/24/02	76	16	2	2.91E-14	9/27/02	19	17	0.067	9.71E-16	24.26%
E1075	9/23/02	8:17am	5:45pm	568	46	2.59E+07	9/24/02	96	16	2.66667	3.78E-14	9/27/02	17	17	0	0.00E+00	0.00%
W1075	9/23/02	7:58am	5:47pm	589	41	2.39E+07	9/24/02	90	16	2.46667	3.78E-14	9/27/02	16	17	0	0.00E+00	0.00%
N1076	9/24/02	8:00am	4:19pm	499	49	2.42E+07	9/25/02	39	17	0.73333	1.11E-14	9/30/02	20	19	0.033	5.04E-16	12.61%
S1076	9/24/02	8:07am	4:15pm	488	51	2.47E+07	9/25/02	27	17	0.33333	4.96E-15	9/30/02	21	19	0.067	9.91E-16	24.78%
E1076	9/24/02	8:10am	4:12pm	482	40	1.91E+07	9/25/02	30	17	0.43333	8.32E-15	9/30/02	18	19	0	0.00E+00	0.00%
W1076	9/24/02	8:07am	4:30pm	503	51	2.54E+07	9/25/02	33	17	0.53333	7.69E-15	9/30/02	15	19	0	0.00E+00	0.00%
N1077	9/25/02	8:00am	4:15pm	495	42	2.06E+07	9/26/02	125	16	3.63333	6.47E-14	9/30/02	19	19	0	0.00E+00	0.00%
S1077	9/25/02	8:04am	4:15pm	491	60	2.92E+07	9/26/02	84	16	2.26667	2.85E-14	9/30/02	20	19	0.033	4.19E-16	10.47%
E1077	9/25/02	8:04am	4:21pm	497	50	2.46E+07	9/26/02	73	16	1.9	2.83E-14	9/30/02	17	19	0	0.00E+00	0.00%
W1077	9/25/02	8:10am	4:15pm	485	41	1.97E+07	9/26/02	79	16	2.1	3.91E-14	9/30/02	22	19	0.1	1.86E-15	46.51%
N1078	9/26/02	8:00am	4:37pm	517	52	2.66E+07	9/27/02	255	17	7.93333	1.09E-13	10/1/02	17	18	0	0.00E+00	0.00%
S1078	9/26/02	8:02am	4:17pm	495	40	1.96E+07	9/27/02	234	17	7.23333	1.35E-13	10/1/02	19	18	0.033	6.23E-16	15.57%
E1078	9/26/02	8:06am	4:17pm	491	48	2.34E+07	9/27/02	250	17	7.76667	1.22E-13	10/1/02	21	18	0.1	1.57E-15	39.25%
W1078	9/26/02	8:04am	4:35pm	511	42	2.13E+07	9/27/02	223	17	6.86667	1.18E-13	10/1/02	17	18	0	0.00E+00	0.00%
N1079	9/27/02	8:18am	4:13pm	475	57	2.68E+07	9/30/02	20	19	0.03333	4.55E-16	10/2/02	16	16	0	0.00E+00	0.00%
S1079	9/27/02	8:00am	4:12pm	492	57	2.78E+07	9/30/02	19	19	0	0.00E+00	10/2/02	15	16	0	0.00E+00	0.00%
E1079	9/27/02	8:20am	4:10pm	470	38	1.77E+07	9/30/02	31	19	0.4	8.29E-15	10/2/02	17	16	0.033	6.91E-16	17.26%
W1079	9/27/02	8:10am	4:15pm	485	48	2.31E+07	9/30/02	21	19	0.06667	1.06E-15	10/2/02	19	16	0.1	1.59E-15	39.73%

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report
341 East Ohio Street Project- Chicago, IL

North Monitor **Week #18 9/30/02 - 10/4/02** **(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/30/02	490	0.00E+00	0.00E+00	Air Monitoring Completed
10/1/02	475	1.13E-15	5.37E-13	
10/2/02	0	0.00E+00	0.00E+00	
10/3/02	0	0.00E+00	0.00E+00	
10/4/02	0	0.00E+00	0.00E+00	
965		1.13E-15	5.37E-13	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 5.56E-16 uCi/ml

Percentage of Release Limit of = 13.91%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/30/02	490	0.00E+00	0.00E+00	Air Monitoring Completed
10/1/02	478	0.00E+00	0.00E+00	
10/2/02	0	0.00E+00	0.00E+00	
10/3/02	0	0.00E+00	0.00E+00	
10/4/02	0	0.00E+00	0.00E+00	
968		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/30/02	473	0.00E+00	0.00E+00	Air Monitoring Completed
10/1/02	474	0.00E+00	0.00E+00	
10/2/02	0	0.00E+00	0.00E+00	
10/3/02	0	0.00E+00	0.00E+00	
10/4/02	0	0.00E+00	0.00E+00	
947		0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_{s,i} C_i}{\sum T_s}$$

$$\sum T_s$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
9/30/02	491	6.28E-16	3.08E-13	Air Monitoring Completed
10/1/02	473	0.00E+00	0.00E+00	
10/2/02	0	0.00E+00	0.00E+00	
10/3/02	0	0.00E+00	0.00E+00	
10/4/02	0	0.00E+00	0.00E+00	
964		6.28E-16	3.08E-13	

$$C_{avg} = \frac{\sum T_{s,j} C_i}{\sum T_s}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 3.20E-16 uCi/ml

Percentage of Release Limit of = 8.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

341 East Ohio Street Project - Chicago, IL

Week 18

September 30, 2002 - October 4, 2002

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N1080	9/30/02	7:59am	4:09pm	490	55	2.67E+07	10/1/02	187	18	5.63333	7.73E-14	10/7/02	16	17	0	0.00E+00	0.00%
S1080	9/30/02	8:00am	4:10pm	490	50	2.43E+07	10/1/02	190	18	5.73333	8.66E-14	10/7/02	17	17	0	0.00E+00	0.00%
E1080	9/30/02	8:16am	4:09pm	473	52	2.44E+07	10/1/02	161	18	4.76667	7.17E-14	10/7/02	16	17	0	0.00E+00	0.00%
W1080	9/30/02	8:01am	4:12pm	491	40	1.95E+07	10/1/02	94	18	2.53333	4.77E-14	10/7/02	18	17	0.033	6.28E-16	15.70%
N1081	10/1/02	8:02am	3:57pm	475	46	2.17E+07	10/2/02	381	16	12.1667	2.06E-13	10/7/02	19	17	0.067	1.13E-15	28.22%
S1081	10/1/02	8:01am	3:59pm	478	48	2.27E+07	10/2/02	362	16	11.5333	1.86E-13	10/7/02	16	17	0	0.00E+00	0.00%
E1081	10/1/02	8:04am	3:58pm	474	40	1.88E+07	10/2/02	328	16	10.4	2.03E-13	10/7/02	17	17	0	0.00E+00	0.00%
W1081	10/1/02	8:04am	3:57pm	473	41	1.92E+07	10/2/02	357	16	11.3667	2.17E-13	10/7/02	17	17	0	0.00E+00	0.00%

Personal Air Monitoring

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/8/02	R. Petty	PAM1001	002-574	2.5	200	500000	6/7/02	15	16	0.00	0.00E+00
6/8/02	Glenn Huber	PAM1002	002-766	2.5	440	1100000	8/7/02	16	16	0.00	0.00E+00
6/7/02	R. Petty	PAM1003	002-574	2.5	530	1325000	6/10/02	19	16	0.10	1.94E-14 *
6/7/02	Leonard Smith	PAM1004	002-766	2.5	535	1337500	6/10/02	17	16	0.03	6.40E-15 *
6/10/02	Leonard Smith	PAM1005	002-766	2.5	540	1350000	6/11/02	33	17	0.53	1.01E-13 *
6/10/02	R. Petty/W.C.	PAM1006	002-574	2.5	550	1375000	6/11/02	39	17	0.73	1.37E-13 *
6/10/02	Justin Hubbert	PAM1007	002-675	2.5	410	1025000	6/11/02	20	17	0.10	2.50E-14 *
6/11/02	Leonard Smith	PAM1008	002-675	2.5	405	1012500	6/12/02	17	19	0.00	0.00E+00
6/11/02	R. Petty/W.C.	PAM1009	002-574	2.5	416	1040000	6/12/02	16	19	0.00	0.00E+00
6/12/02	Glenn Huber	PAM1010	002-766	2.5	600	1500000	6/13/02	23	18	0.17	2.85E-14 *
6/12/02	R. Petty/ W.C.	PAM1011	002-574	2.5	587	1467500	6/13/02	22	18	0.13	2.33E-14 *
6/13/02	Leonard Smith	PAM1012	002-675	2.5	570	1425000	6/14/02	16	17	0.00	0.00E+00
6/13/02	R. Petty/W.C.	PAM1013	002-574	2.5	570	1425000	6/14/02	15	17	0.00	0.00E+00
6/14/02	Justin Hubbert	PAM1014	002-574	2.5	300	750000	6/17/02	21	22	0.00	0.00E+00
6/14/02	R. Petty/ W.C.	PAM1015	002-766	2.5	593	1482500	6/17/02	22	22	0.00	0.00E+00
6/14/02	Leonard Smith	PAM1016	006-234	2.5	370	925000	6/17/02	19	22	0.00	0.00E+00

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/7/02	R. Petty	PAM1003	002-574	2.5	530	1325000	6/12/02	17	19	0.00	0.00E+00
6/7/02	Leonard Smith	PAM1004	002-766	2.5	535	1337500	6/12/02	16	19	0.00	0.00E+00
6/10/02	Leonard Smith	PAM1005	002-766	2.5	540	1350000	6/14/02	16	17	0.00	0.00E+00
6/10/02	R. Petty / W.C.	PAM1006	002-574	2.5	550	1375000	6/14/02	17	17	0.00	0.00E+00
6/10/02	Justin Hubbert	PAM1007	002-675	2.5	410	1025000	6/14/02	14	17	0.00	0.00E+00
6/12/02	Glenn Huber	PAM1010	002-766	2.5	600	1500000	6/17/02	22	22	0.00	0.00E+00
6/12/02	R. Petty / W.C.	PAM1011	002-574	2.5	587	1467500	6/17/02	20	22	0.00	0.00E+00

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 3 June 17 - June 21, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/17/02	Justin Hubbert	PAM1017	002-574	2.5	320	800000	6/18/02	18	16	0.07	2.14E-14 *
6/17/02	R. Petty/ W.C.	PAM1018	002-675	2.5	577	1442500	6/18/02	34	16	0.60	1.07E-13 *
6/17/02	Brett Barton	PAM1019	002-574	2.5	85	212500	6/18/02	28	16	0.40	4.83E-13 *
6/17/02	Leonard Smith	PAM1020	006-234	2.5	320	800000	6/18/02	16	16	0.00	0.00E+00
6/18/02	R. Petty/W.C.	PAM1021	002-675	2.5	580	1450000	6/19/02	37	25	0.40	7.08E-14 *
6/18/02	Justin Hubbert	PAM1022	006-234	2.5	300	750000	6/19/02	24	25	0.00	0.00E+00
6/18/02	Leonard Smith	PAM1023	002-574	2.5	180	450000	6/19/02	20	25	0.00	0.00E+00
6/19/02	Justin Hubbert	PAM1024	002-675	2.5	250	625000	6/20/02	17	17	0.00	0.00E+00
6/19/02	Leonard Smith	PAM1025	002-675	2.5	240	600000	6/20/02	21	17	0.13	5.70E-14 *
6/19/02	R. Petty/W.C.	PAM1026	002-574	2.5	570	1425000	6/20/02	26	17	0.30	5.40E-14 *
6/20/02	Leonard Smith	PAM1027	006-234	2.5	540	1350000	6/21/02	36	16	0.67	1.27E-13 *
6/20/02	Justin Hubbert	PAM1028	002-574	2.5	265	662500	6/21/02	35	16	0.63	2.45E-13 *
6/20/02	R. Petty/W.C.	PAM1029	002-766	2.5	570	1425000	6/21/02	43	16	0.90	1.82E-13 *
6/21/02	Odell	PAM1030	006-234	2.5	120	300000	6/24/02	18	22	0.00	0.00E+00
6/21/02	Leonard Smith	PAM1031	002-574	2.5	555	1387500	6/24/02	16	22	0.00	0.00E+00
6/21/02	R. Petty/W.C.	PAM1032	002-766	2.5	560	1400000	6/24/02	19	22	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 3 June 17 - June 21, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/17/02	Justin Hubbert	PAM1017	002-574	2.5	320	800000	6/21/02	16	16	0.00	0.00E+00
6/17/02	R. Petty / W.C.	PAM1018	002-675	2.5	577	1442500	6/21/02	18	16	0.07	1.19E-14
6/17/02	Brett Barton	PAM1019	002-574	2.5	85	212500	6/21/02	16	16	0.00	0.00E+00
6/18/02	R. Petty / W.C.	PAM1021	002-675	2.5	580	1450000	6/24/02	21	22	0.00	0.00E+00
6/19/02	Leonard Smith	PAM1025	002-675	2.5	240	600000	6/24/02	18	22	0.00	0.00E+00
6/19/02	R. Petty / W.C.	PAM1026	002-574	2.5	570	1425000	6/24/02	23	22	0.03	6.00E-15
6/20/02	Leonard Smith	PAM1027	006-234	2.5	540	1350000	6/25/02	20	18	0.07	1.27E-14
6/20/02	Justin Hubbert	PAM1028	002-574	2.5	265	662500	6/25/02	16	18	0.00	0.00E+00
6/20/02	R. Petty / W.C.	PAM1029	002-766	2.5	570	1425000	6/25/02	18	18	0.00	0.00E+00

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 4 June 24 - June 28, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
6/24/02	R. Petty / W.C.	PAM1033	002-766	2.5	565	1412500	6/28/02	18	19	0.00	0.00E+00	0.00%
6/24/02	Leonard Smith	PAM1034	002-574	2.5	565	1412500	6/28/02	21	19	0.07	1.21E-14	2.42%
6/25/02	Leonard Smith	PAM1035	006-234	2.5	240	600000	7/1/02	22	20	0.07	2.85E-14	5.70%
6/25/02	Justin Hubbert	PAM1036	006-234	2.5	180	450000	7/1/02	20	20	0.00	0.00E+00	0.00%
6/25/02	R. Petty / W.C.	PAM1037	002-675	2.5	520	1300000	7/1/02	20	20	0.00	0.00E+00	0.00%
6/26/02	Leonard Smith	PAM1038	002-766	2.5	240	600000	7/1/02	16	20	0.00	0.00E+00	0.00%
6/26/02	R. Petty / W.C.	PAM1039	002-574	2.5	555	1387500	7/1/02	17	20	0.00	0.00E+00	0.00%
6/27/02	Leonard Smith	PAM1041	002-675	2.5	290	725000	7/2/02	15	16	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 4 June 24 - June 28, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/24/02	R. Petty/W.C.	PAM1033	002-786	2.5	585	1412500	6/25/02	27	18	0.30	5.45E-14*
6/24/02	Leonard Smith	PAM1034	002-574	2.5	565	1412500	6/25/02	22	18	0.13	2.42E-14*
6/25/02	Leonard Smith	PAM1035	006-234	2.5	240	600000	6/26/02	30	19	0.37	1.57E-13*
6/25/02	Justin Hubbert	PAM1036	006-234	2.5	180	450000	6/26/02	28	19	0.30	1.71E-13*
6/25/02	R. Petty/W.C.	PAM1037	002-675	2.5	520	1300000	6/26/02	45	19	0.87	1.71E-13*
6/26/02	Leonard Smith	PAM1038	002-766	2.5	240	600000	6/27/02	36	19	0.57	2.42E-13*
6/26/02	R. Petty/W.C.	PAM1039	002-574	2.5	555	1387500	6/27/02	44	19	0.83	1.54E-13*
6/26/02	Justin Hubbert	PAM1040	002-786	2.5	280	700000	6/27/02	18	19	0.00	0.00E+00
6/27/02	Leonard Smith	PAM1041	002-675	2.5	290	725000	6/28/02	22	19	0.10	3.54E-14*
6/27/02	R. Petty/W.C.	PAM1042	006-234	2.5	570	1425000	6/28/02	14	19	0.00	0.00E+00
6/27/02	Justin Hubbert	PAM1043	002-675	2.5	270	675000	6/28/02	16	19	0.00	0.00E+00
6/28/02	Leonard Smith	PAM1044	006-234	2.5	555	1387500	7/1/02	16	20	0.00	0.00E+00
6/28/02	R. Petty/W.C.	PAM1045	002-675	2.5	555	1387500	7/1/02	18	20	0.00	0.00E+00

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 5 July 1 - July 3, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
7/1/02	Justin Hubbert	PAM1046	002-766	2.5	474	1185000	7/2/02	18	16	0.07	1.44E-14*
7/1/02	R. Petty/W.C.	PAM1047	002-574	2.5	475	1187500	7/2/02	15	16	0.00	0.00E+00
7/2/02	Justin Hubbert	PAM1048	002-574	2.5	495	1237500	7/3/02	24	18	0.20	4.15E-14*
7/2/02	R. Petty/W.C.	PAM1049	006-234	2.5	500	1250000	7/3/02	18	18	0.00	0.00E+00
7/3/02	Justin Hubbert	PAM1050	002-766	2.5	500	1250000	7/8/02	18	22	0.00	0.00E+00
7/3/02	R. Petty/W.C.	PAM1051	002-574	2.5	510	1275000	7/8/02	19	22	0.00	0.00E+00

Only 3 sample collection days due to 4th of July holiday

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 5 July 1 - July 3, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
7/1/02	Justin Hubbert	PAM1046	002-786	2.5	474	1185000	7/8/02	21	22	0.00	0.00E+00	0.00%
7/2/02	Justin Hubbert	PAM1048	002-574	2.5	495	1237500	7/8/02	23	22	0.03	8.91E-15	1.38%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 6 July 8 - July 12, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
7/8/02	Leonard Smith	PAM1052	002-768	2.5	240	600000	7/9/02	19	22	0.00	0.00E+00
7/8/02	Justin Hubbert	PAM1053	002-766	2.5	270	675000	7/9/02	23	22	0.03	1.27E-14*
7/8/02	R. Petty/W.C.	PAM1054	002-574	2.5	545	1362500	7/9/02	21	22	0.00	0.00E+00
7/8/02	Justin Hubbert	PAM1055	006-234	2.5	272	680000	7/10/02	18	18	0.00	0.00E+00
7/9/02	Leonard Smith	PAM1056	006-234	2.5	232	580000	7/10/02	17	18	0.00	0.00E+00
7/9/02	R. Petty/W.C.	PAM1057	002-675	2.5	557	1392500	7/10/02	16	18	0.00	0.00E+00
7/10/02	Leonard Smith	PAM1058	006-234	2.5	240	600000	7/11/02	17	19	0.00	0.00E+00
7/10/02	Justin Hubbert	PAM1059	006-234	2.5	217	542500	7/11/02	15	19	0.00	0.00E+00
7/10/02	R. Petty/W.C.	PAM1060	002-675	2.5	515	1287500	7/11/02	19	19	0.00	0.00E+00
7/11/02	R. Petty/W.C.	PAM1061	006-234	2.5	500	1250000	7/12/02	16	17	0.00	0.00E+00
7/11/02	Leonard Smith	PAM1062	002-675	2.5	530	1325000	7/12/02	15	17	0.00	0.00E+00
7/12/02	Justin Hubbert	PAM1063	002-675	2.5	277	692500	7/15/02	17	17	0.00	0.00E+00
7/12/02	Leonard Smith	PAM1064	002-675	2.5	239	597500	7/15/02	16	17	0.00	0.00E+00
7/12/02	R. Petty/W.C.	PAM1065	006-234	2.5	557	1392500	7/15/02	19	17	0.07	1.23E-14*

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 6 July 8 - July 12, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
7/8/02	Justin Hubbert	PAM1053	002-768	2.5	270	675000	7/8/02	17	17	0.00	0.00E+00	0.00%
7/12/02	R. Petty/W.C.	PAM1065	006-234	2.5	557	1392500	7/16/02	18	21	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 7 July 15 - July 19, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
7/15/02	Leonard Smith	PAM1066	002-675	2.5	540	1350000	7/16/02	18	21	0.00	0.00E+00
7/15/02	R. Petty/W.C.	PAM1067	002-574	2.5	554	1385000	7/16/02	24	21	0.10	1.85E-14*
7/16/02	Leonard Smith	PAM1068	006-234	2.5	265	662500	7/17/02	28	22	0.20	7.75E-14*
7/16/02	Justin Hubbert	PAM1069	006-234	2.5	205	512500	7/17/02	29	22	0.23	1.17E-13*
7/16/02	R. Petty/W.C.	PAM1070	002-786	2.5	485	1212500	7/17/02	18	22	0.00	0.00E+00
7/17/02	Leonard Smith	PAM1071	002-574	2.5	240	600000	7/18/02	28	18	0.33	1.43E-13*
7/17/02	Justin Hubbert	PAM1072	002-574	2.5	285	712500	7/18/02	35	18	0.57	2.04E-13*
7/17/02	R. Petty/W.C.	PAM1073	000-675	2.5	560	1400000	7/18/02	34	18	0.53	9.78E-14*
7/18/02	Leonard Smith	PAM1074	002-786	2.5	235	587500	7/19/02	18	17	0.00	0.00E+00
7/18/02	Justin Hubbert	PAM1075	002-786	2.5	195	487500	7/19/02	21	17	0.13	7.02E-14*
7/18/02	R. Petty/W.C.	PAM1076	006-234	2.5	480	1150000	7/19/02	25	17	0.27	5.95E-14*
7/19/02	R. Petty/W.C.	PAM1077	002-675	2.5	535	1337500	7/22/02	15	18	0.00	0.00E+00
7/19/02	Justin Hubbert	PAM1078	006-234	2.5	580	1450000	7/22/02	17	18	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 7 July 15 - July 19, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
7/15/02	R. Petty/W.C.	PAM1067	002-574	2.5	554	1385000	7/19/02	17	17	0.00	0.00E+00	0.00%
7/16/02	Leonard Smith	PAM1068	006-234	2.5	265	662500	7/22/02	16	18	0.00	0.00E+00	0.00%
7/16/02	Justin Hubbert	PAM1069	006-234	2.5	205	512500	7/22/02	17	18	0.00	0.00E+00	0.00%
7/17/02	Leonard Smith	PAM1071	002-574	2.5	240	600000	7/22/02	17	18	0.00	0.00E+00	0.00%
7/17/02	Justin Hubbert	PAM1072	002-574	2.5	285	712500	7/22/02	16	18	0.00	0.00E+00	0.00%
7/17/02	R. Petty/W.C.	PAM1073	002-675	2.5	560	1400000	7/22/02	20	18	0.07	1.22E-14	2.44%
7/18/02	Justin Hubbert	PAM1075	002-766	2.5	195	487500	7/23/02	18	17	0.03	1.75E-14	3.51%
7/18/02	R. Petty/W.C.	PAM1076	006-234	2.5	460	1150000	7/23/02	17	17	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 8 July 22 - July 26, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
7/22/02	Leonard Smith	PAM1079	002-574	2.5	220	550000	7/23/02	16	17	0.00	0.00E+00
7/22/02	Roger Petty	PAM1080	006-234	2.5	203	507500	7/23/02	19	17	0.07	3.37E-14

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 8 July 22 - July 26, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
7/22/02	R. Petty/W.C.	PAM1080	006-234	2.5	203	507500	7/26/02	19	21	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/mlAdministrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 9 July 29 - August 2, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
8/1/02	Leonard Smith	PAM1081	006-234	2.5	210	525000	8/2/02	19	17	0.07	3.26E-14
8/1/02	Roger Petty	PAM1082	002-675	2.5	390	975000	8/2/02	23	17	0.20	5.26E-14
8/2/02	Leonard Smith	PAM1083	002-768	2.5	155	387500	8/5/02	19	19	0.00	0.00E+00
8/2/02	Roger Petty	PAM1084	002-574	2.5	305	762500	8/5/02	18	19	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 9 July 29 - August 2, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
8/1/02	Leonard Smith	PAM1081	008-234	2.5	210	525000	8/8/02	18	22	0.00	0.00E+00	0.00%
8/1/02	Roger Petty	PAM1082	002-875	2.5	390	975000	8/6/02	19	22	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

341 East Ohio Street Site - Chicago, IL

Week 10 August 5 - August 9, 2002

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
NO PAM's During Week of 8/5/02 - 8/9/02												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 10 August 5 - August 9, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
NO PAM's During Week of 8/5/02 - 8/9/02											

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 11 August 12 - August 16, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
8/16/02	Leonard Smith	PAM1085	002-574	2.5	220	550000	8/19/02	17	18	0.00	0.00E+00
8/16/02	Roger Petty	PAM1086	002-766	2.5	220	550000	8/19/02	18	18	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 11 August 12 - August 16, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
NO 4 Day Analysis Required - All Day After Counts at Background Levels												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 12 August 19 - August 23, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
8/19/02	Leonard Smith	PAM1087	002-574	2.5	322	805000	8/20/00	19	19	0.00	0.00E+00
8/19/02	Roger Petty	PAM1088	006-234	2.5	320	800000	8/20/02	18	18	0.00	0.00E+00
8/20/02	Glenn Huber	PAM1089	006-234	2.5	132	330000	8/21/02	20	18	0.07	5.19E-14 *
8/20/02	Roger Petty	PAM1090	002-574	2.5	135	337500	8/21/02	17	18	0.00	0.00E+00
8/21/02	Leonard Smith	PAM1091	002-574	2.5	395	987500	8/22/02	28	20	0.27	8.93E-14 *
8/21/02	Roger Petty	PAM1092	002-786	2.5	420	1050000	8/22/02	22	20	0.07	1.63E-14 *
8/23/02	Glenn Huber	PAM1093	002-786	2.5	135	337500	8/26/02	18	19	0.00	0.00E+00
8/23/02	Roger Petty	PAM1094	002-574	2.5	285	712500	8/26/02	16	19	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

341 East Ohio Street Site - Chicago, IL

Week 12 August 19 - August 23, 2002

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
8/20/02	Glenn Huber	PAM1089	006-234	2.5	132	330000	8/26/02	16	19	0.00	0.00E+00	0.00%
8/21/02	Leonard Smith	PAM1091	002-574	2.5	395	987500	8/26/02	17	19	0.00	0.00E+00	0.00%
8/21/02	Roger Petty	PAM1092	002-766	2.5	420	1050000	8/26/02	18	19	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)**Week 13 August 26 - August 30, 2002**

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
NO PAM's During Week of 8/26/02 - 8/30/02											

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 13 August 26 - August 30, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
NO PAM's During Week of 8/26/02 - 8/30/02												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 14 September 2 - September 6, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
9/5/02	Leonard Smith	PAM1095	002-786	2.5	65	162500	9/6/02	16	17	0.00	0.00E+00
9/5/02	Roger Petty	PAM1096	002-574	2.5	585	1462500	9/6/02	17	17	0.00	0.00E+00
9/5/02	Lindsay Aschim	PAM1097	006-234	2.5	520	1300000	9/6/02	19	17	0.07	1.32E-14
9/6/02	Roger Petty	PAM1098	002-786	2.5	420	1050000	9/9/02	16	16	0.00	0.00E+00
9/6/02	Toby Shewan	PAM1099	002-574	2.5	480	1200000	9/9/02	15	16	0.00	0.00E+00
9/6/02	Lindsay Aschim	PAM1100	006-234	2.5	353	882500	9/9/02	16	16	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

341 East Ohio Street Site - Chicago, IL

Week 14 September 2 - September 6, 2002

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
9/5/02	Lindsay Aschim	PAM1097	008-234	2.5	520	1300000	9/10/02	18	17	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 15 September 9 - September 13, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
9/9/02	Roger Petty	PAM1101	002-766	2.5	455	1137500	9/10/02	25	17	0.27	6.02E-14 *
9/9/02	Jerry Krane	PAM1102	002-574	2.5	140	350000	9/10/02	16	17	0.00	0.00E+00
9/9/02	Lindsay Aschim	PAM1103	002-574	2.5	250	625000	9/10/02	17	17	0.00	0.00E+00
9/13/02	Roger Petty	PAM1104	002-766	2.5	417	1042500	9/16/02	18	18	0.00	0.00E+00
9/13/02	Lindsay Aschim	PAM1105	002-574	2.5	420	1050000	9/16/02	17	18	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 15 September 9 - September 13, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
9/9/02	Roger Petty	PAM1101	002-766	2.5	455	1137500	9/13/02	16	17	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 16 September 16 - September 20, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
9/16/02	Roger Petty	PAM1106	002-766	2.5	190	475000	9/17/02	19	16	0.10	5.40E-14 *
9/16/02	Lindsay Aschim	PAM1107	002-675	2.5	196	490000	9/17/02	16	16	0.00	0.00E+00
9/18/02	Roger Petty	PAM1108	002-766	2.5	273	682500	9/19/02	19	17	0.07	2.51E-14 *
9/18/02	Lindsay Aschim	PAM1109	002-675	2.5	267	667500	9/19/02	17	17	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 16 September 16 - September 20, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
9/16/02	Roger Petty	PAM1106	002-766	2.5	190	475000	9/20/02	18	20	0.00	0.00E+00	0.00%
9/18/02	Roger Petty	PAM1108	002-766	2.5	273	682500	9/23/02	17	18	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 17 September 23 - September 27, 2002

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
9/26/02	Lindsay Aschim	PAM1110	002-766	2.5	161	402500	9/27/02	16	17	0.00	0.00E+00
9/26/02	Jerry Krane	PAM1111	002-766	2.5	164	410000	9/27/02	17	17	0.00	0.00E+00
9/26/02	Roger Petty	PAM1112	002-675	2.5	335	837500	9/27/02	19	17	0.07	2.04E-14 *
9/27/02	Jerry Krane	PAM1113	002-675	2.5	420	1050000	9/30/02	18	19	0.00	0.00E+00
9/27/02	Roger Petty	PAM1114	006-234	2.5	420	1050000	9/30/02	16	19	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 17 September 23 - September 27, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
9/26/02	Roger Petty	PAM1112	002-675	2.5	335	837500	10/1/02	18	18	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

341 East Ohio Street Project - Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

**Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.**

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 17 September 23 - September 27, 2002

341 East Ohio Street Site - Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
9/26/02	Roger Petty	PAM1112	002-675	2.5	335	837500	10/1/02	18	18	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

APPENDIX K

Field Gamma Survey Results





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page of

Date 6/6/02 - 6/10/02

Technician Justin Habbert / L. Smith

Inst. Model Can 2201

Serial No. 132844 Source (bottom right)

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

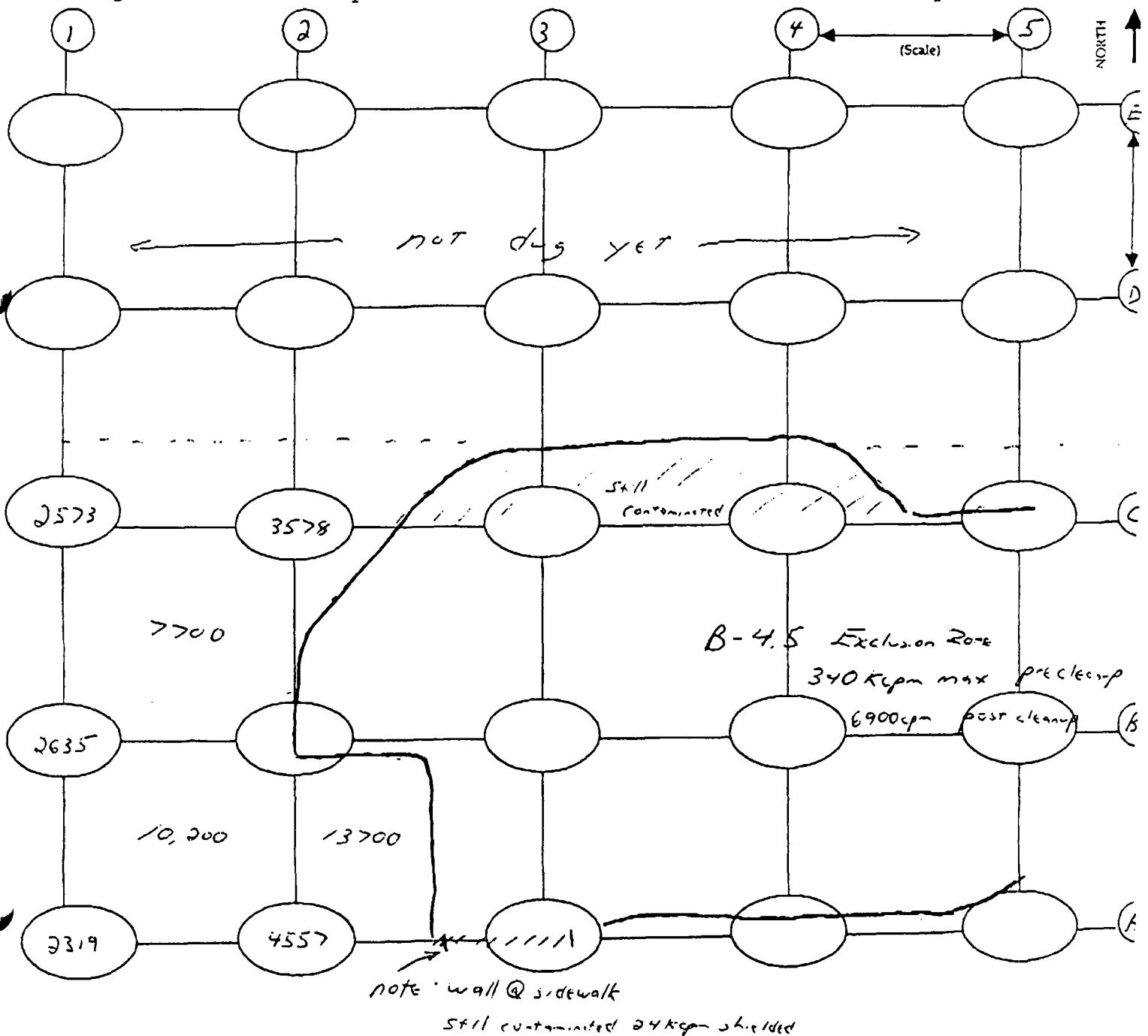
* note:
Exclusion zone
Surveys are shielded

Lift Elevation Surface (below ground)

Background 5100 cpm

Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd.

Date 6/6/02 - 6/10/02

Technician Justin Hubbert / L. Smith

Inst Model Codman 2221

Serial No. 133844
Surface (below separate)

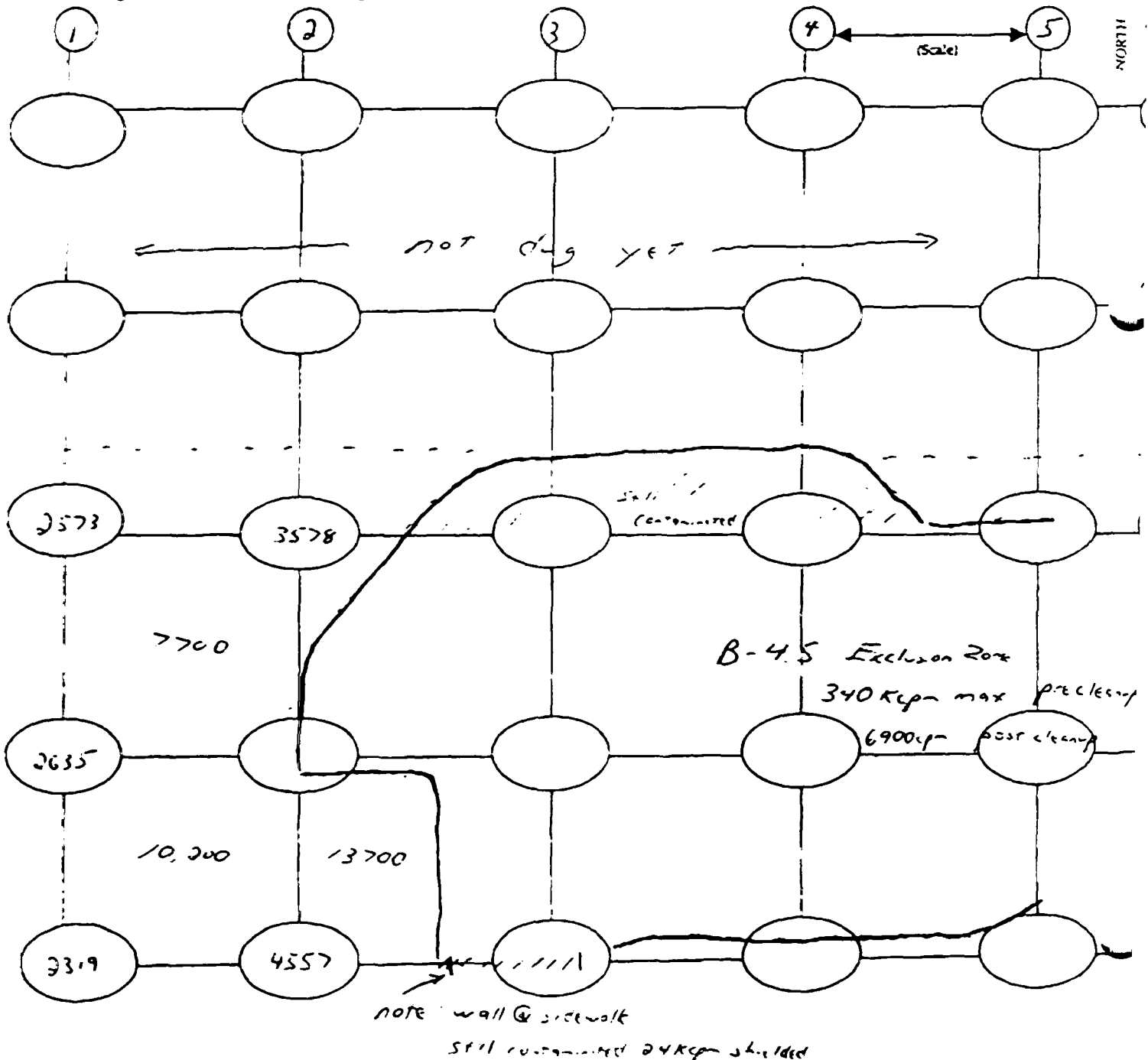
Probe Type: 1"x1" NaI / 2"x2" NaI * not
Shielded / Not Shielded

Lift Elevation Surface (below separate)

Background 5100 cpm

Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





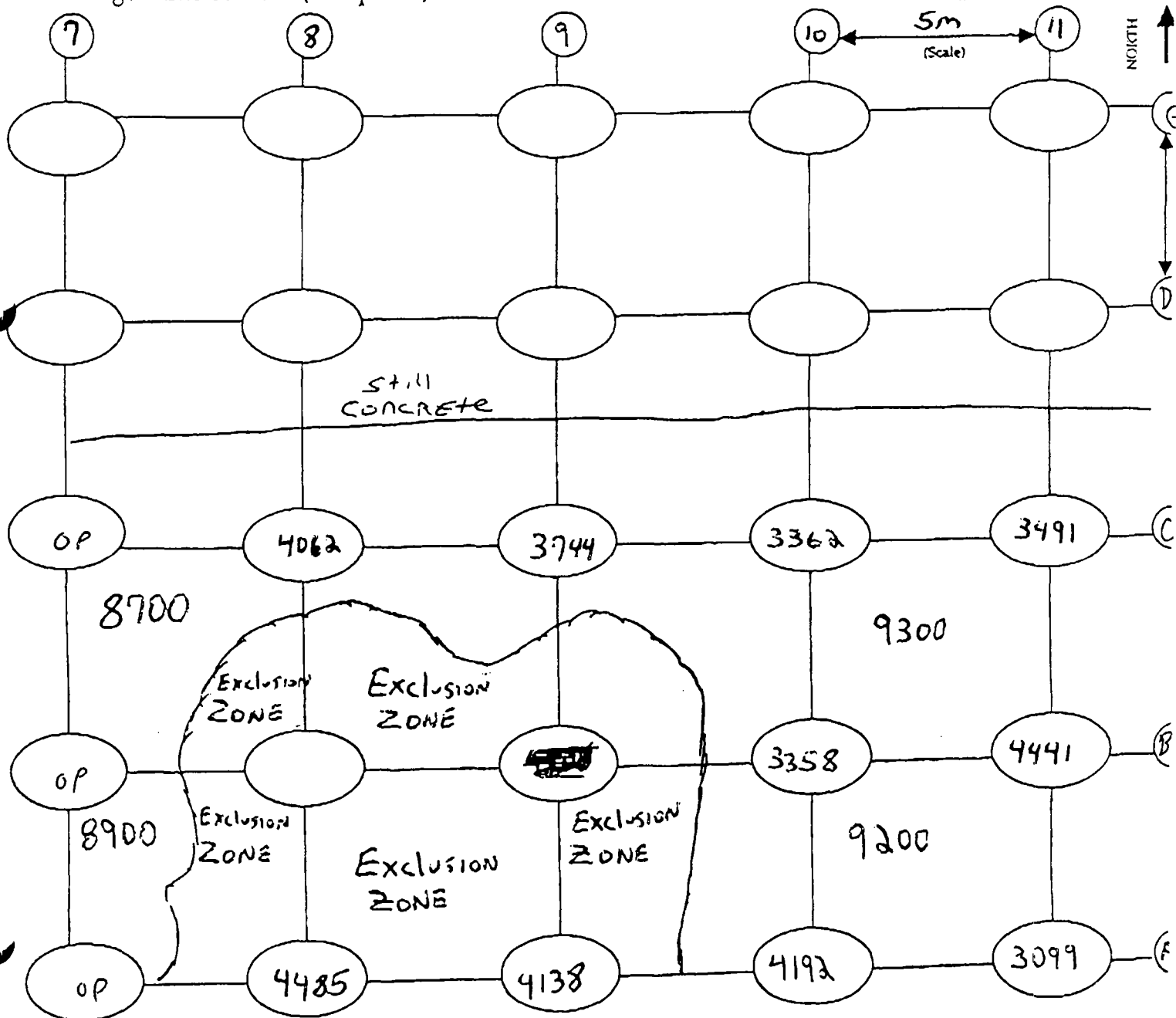
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants Ltd.

Date 6-12-02Technician Justin Hubbert
model # 13a, 841Inst. Model Ludlum 2221Serial No. Probe # 168,148Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedLift Elevation SURFACEBackground 5400 cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd

Date 6-11-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Model # 132841
Serial No. PROBE # 168143

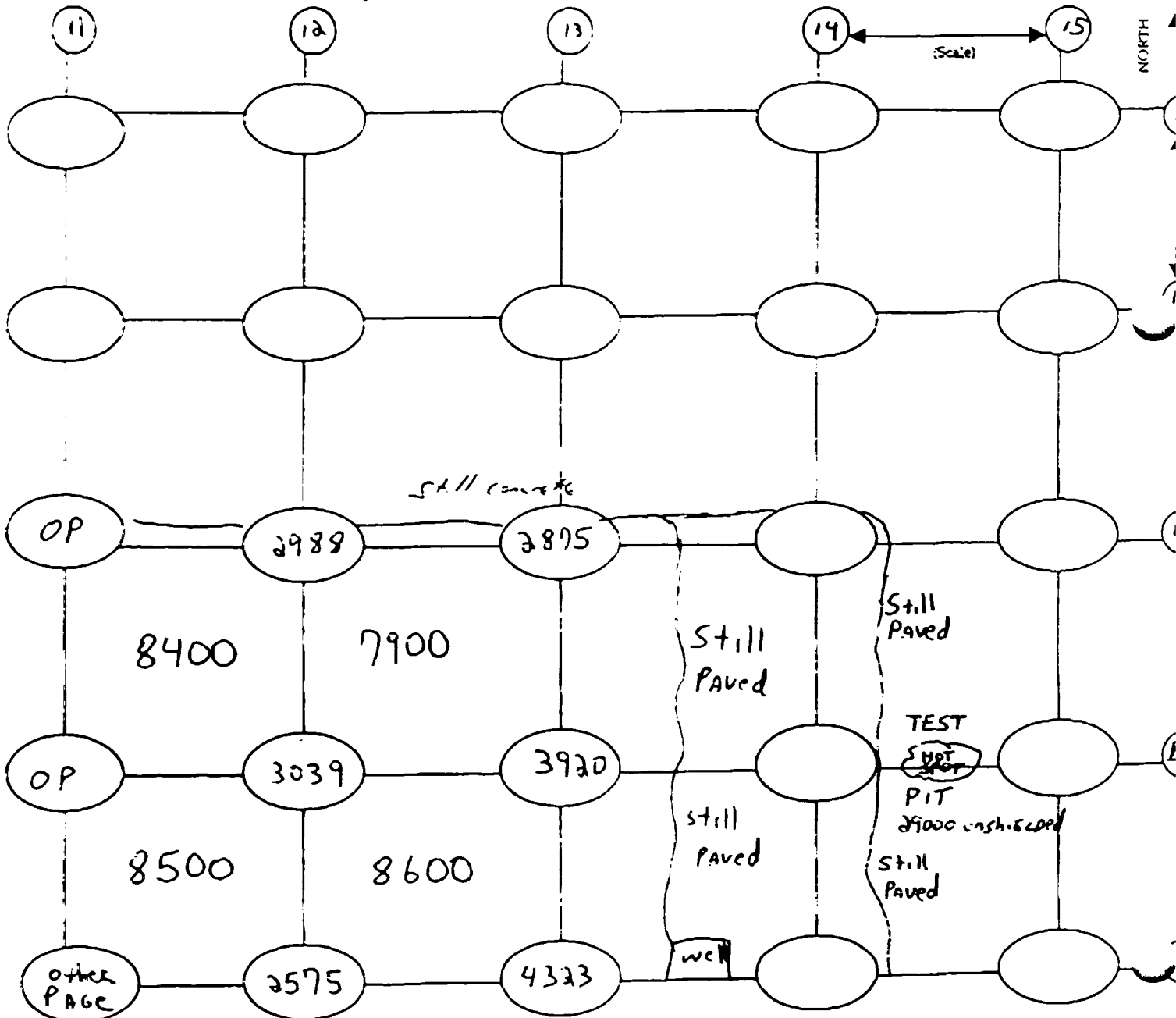
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5400 cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd

Date 6-13-02

Technician Justin Hubbert

Inst. Model Lunum 2221

Serial No. MO01 #126496
PROB# 168143

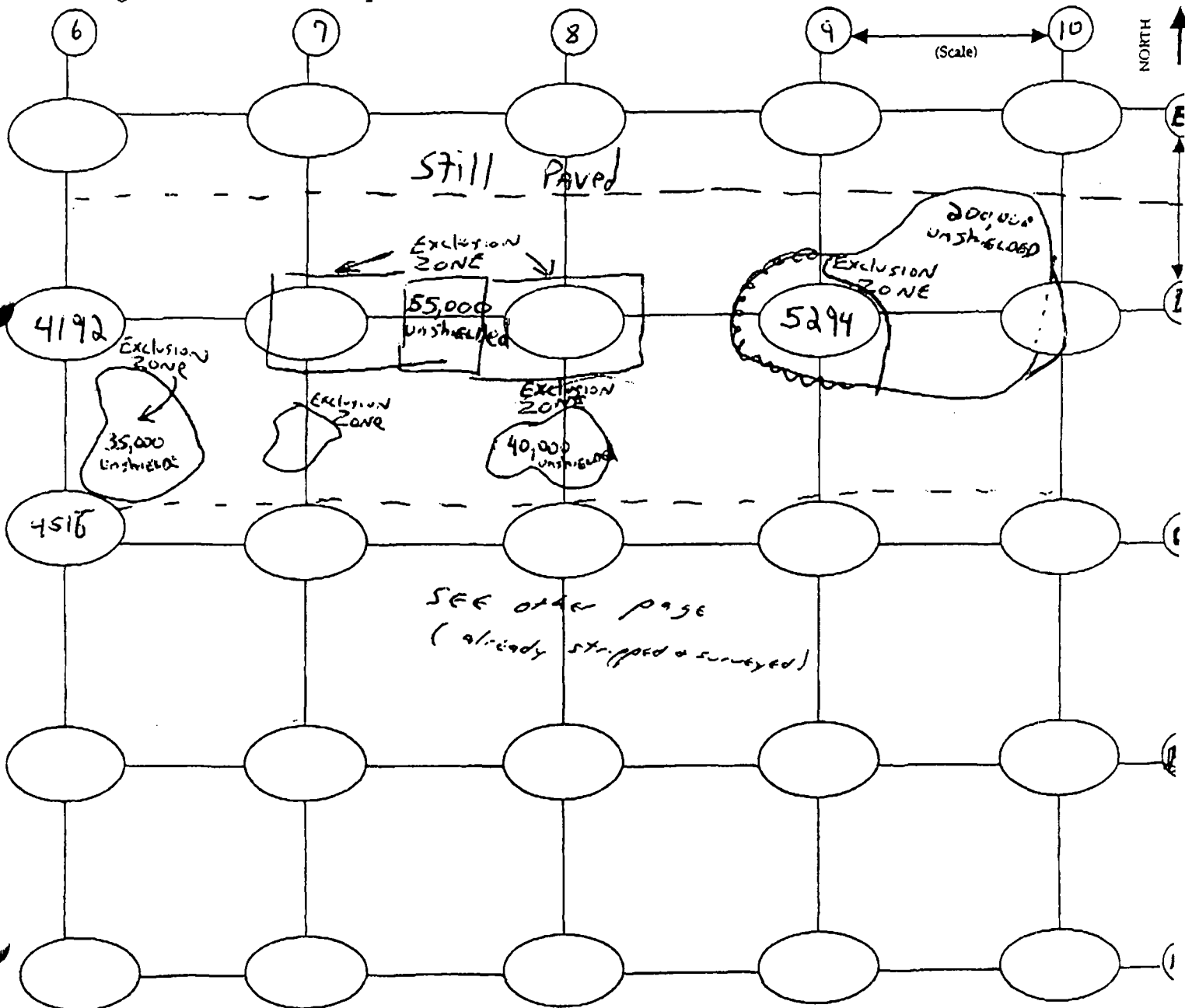
Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation SURFACE

Background 5400 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants Ltd.

Date 6-13-02

Technician Justin Hubbert

Inst. Model Ludlum 3221

model # 126496
Serial No. Probe # 168143

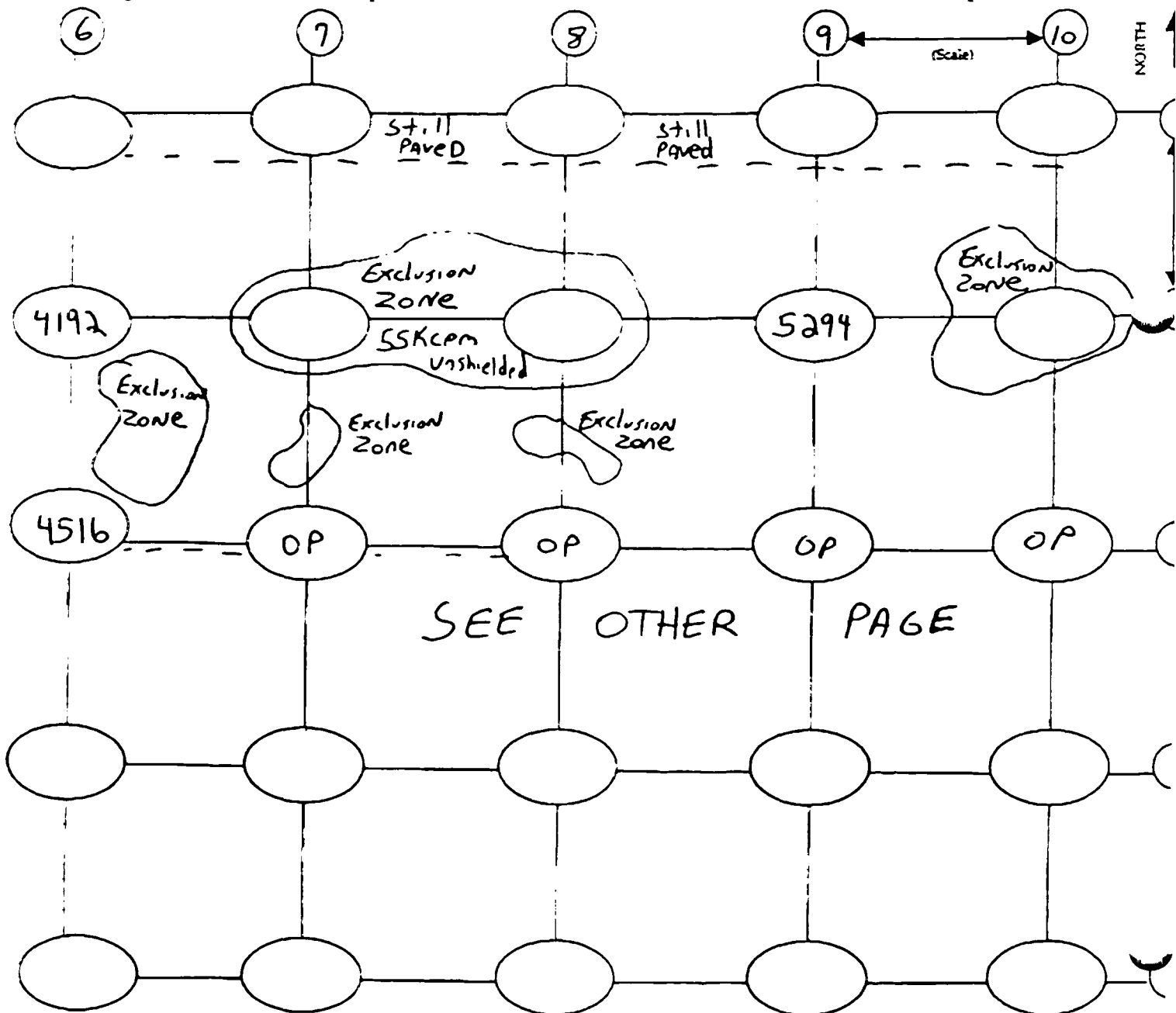
Probe Type: 1"x1"NaI / 2"x2"NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5400 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





REVISED Form 6-13-7

RADIATION SURVEY FORM

Project # 25585-X1 Project Name GMO Page 1 of 1

SSC Co. contacts Ltd

Date 6-13-02

Technician Justin Hubbert
model # 152470

Inst Model Scion 3331

Serial No page # 168193

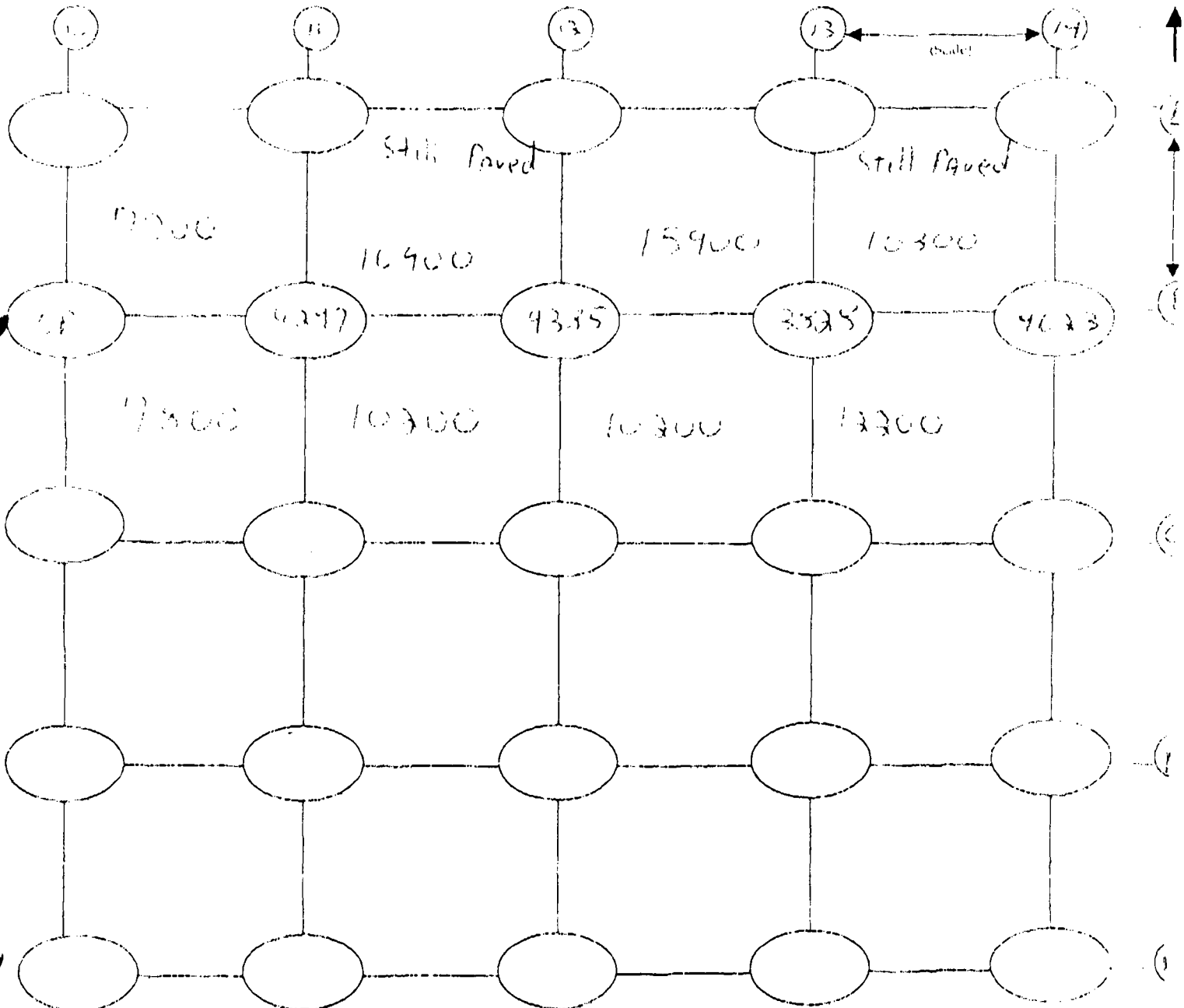
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5400 cpm

Action Level 26,650 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required) Shade areas of elevated counts and record max cpm





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd

Date 6-13-02

Technician Justin Hubbert

Inst Model Ludlum 2221

model # 126496
Serial No. PROB# 168143

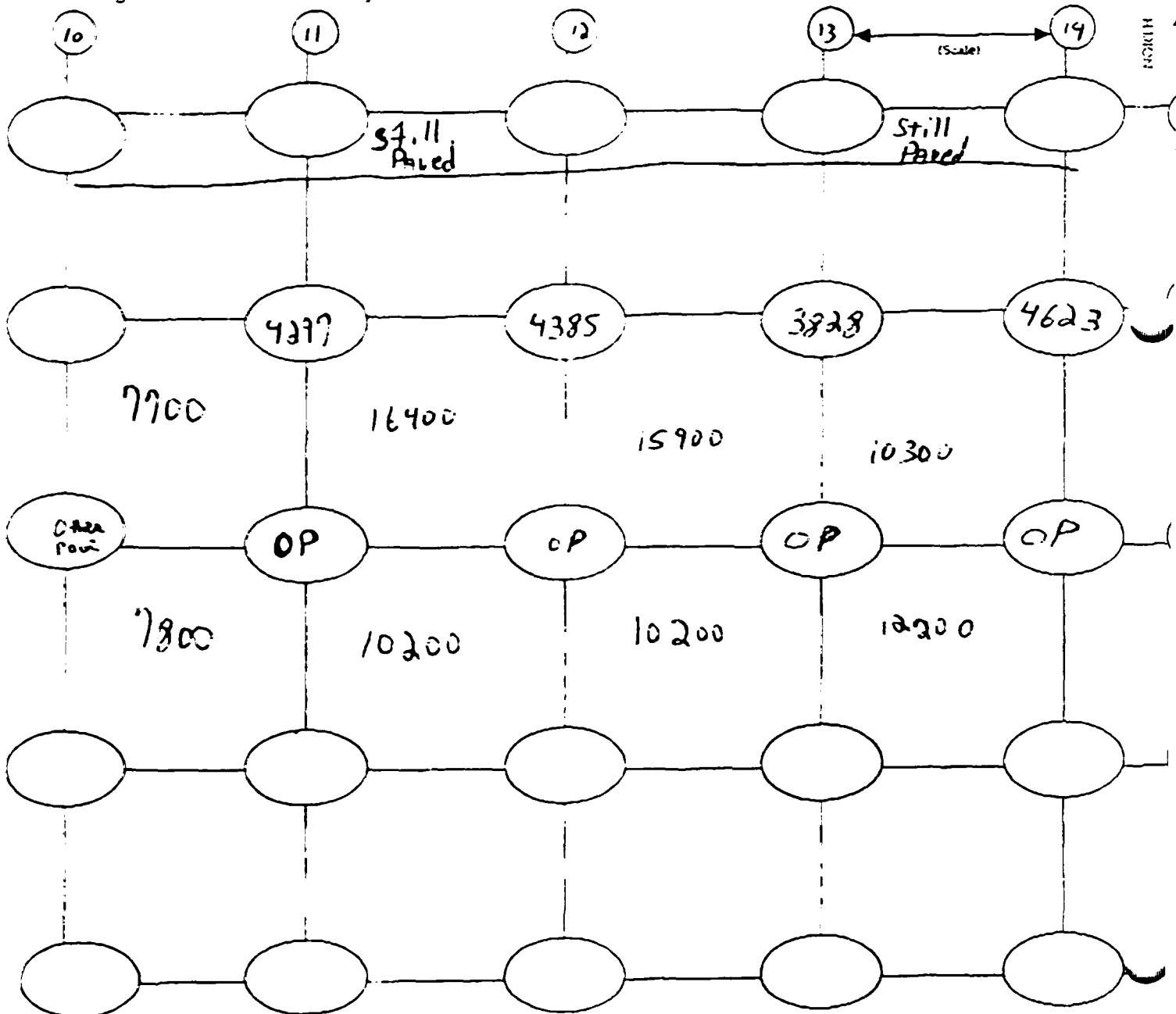
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5400 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





24x96

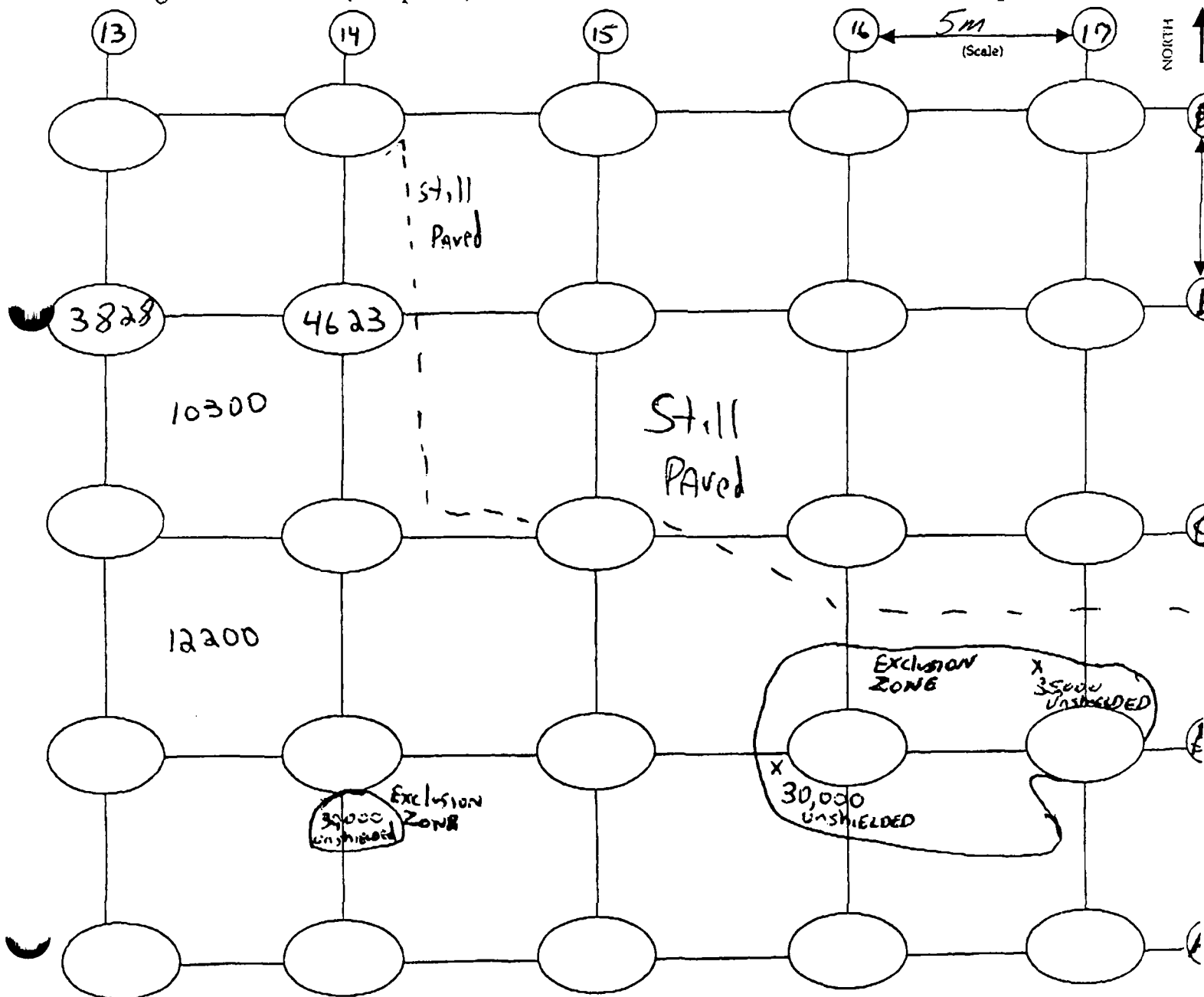
1 WEST @ Tri Life Bldg

RADIATION SURVEY FORM **A-M**Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd.

Date 6-13-02Technician Justin HubbertInst. Model Lucium 2221Serial No. Model # 126996
Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SURFACEBackground 5400 cpmAction Level 20,680 cpm
UNSHIELDED

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants Ltd

Date 6/13 & 6/14/02

Technician Glen Haber

Inst. Model Canberra 3021

Serial No. 130844

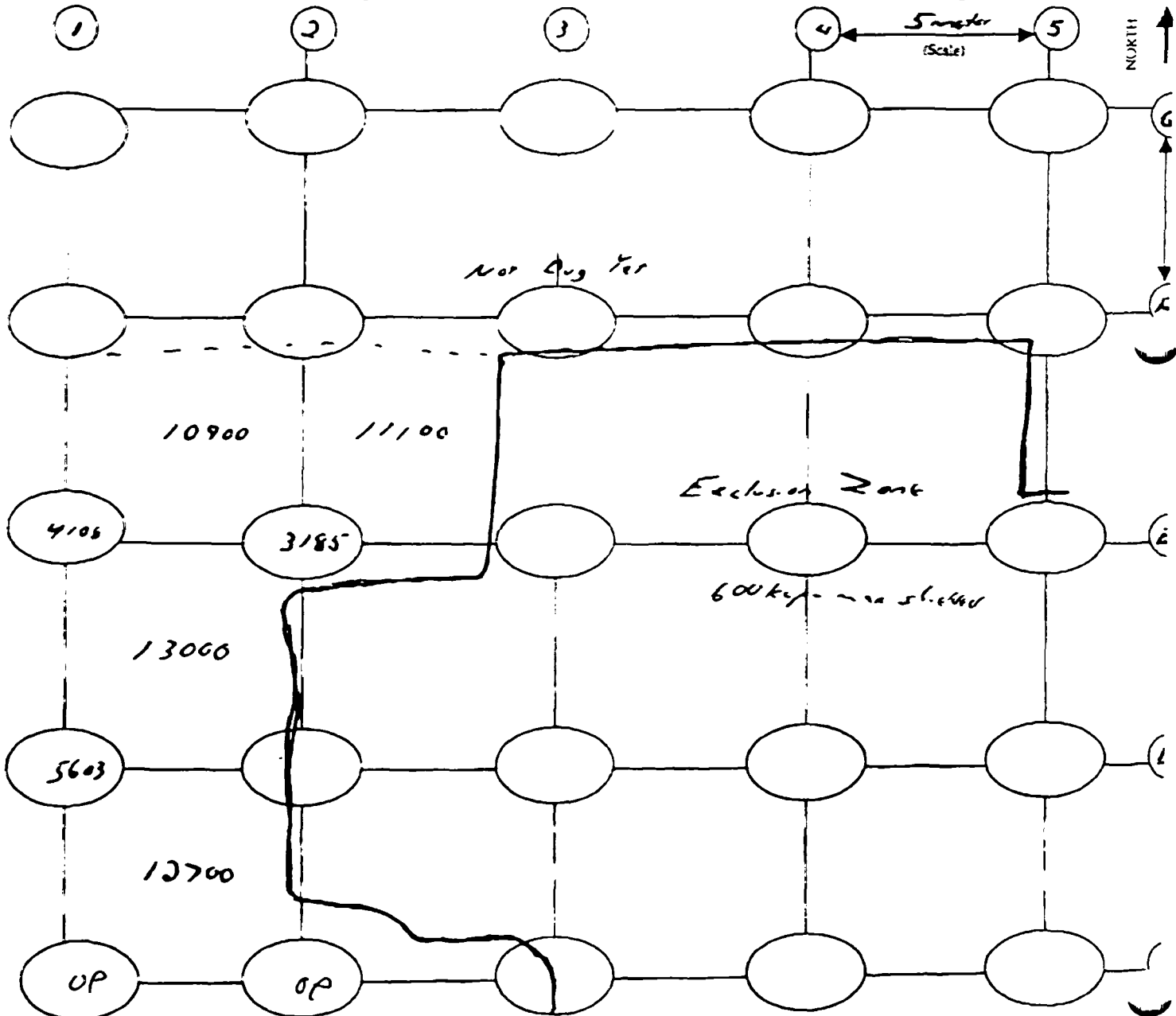
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded / Not Shielded

Lift Elevation surface

Background 5300 cpm

Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd

Date 6/13 - 6/14/02

Technician Glen Huber

Inst. Model 2221

Serial No. 132844

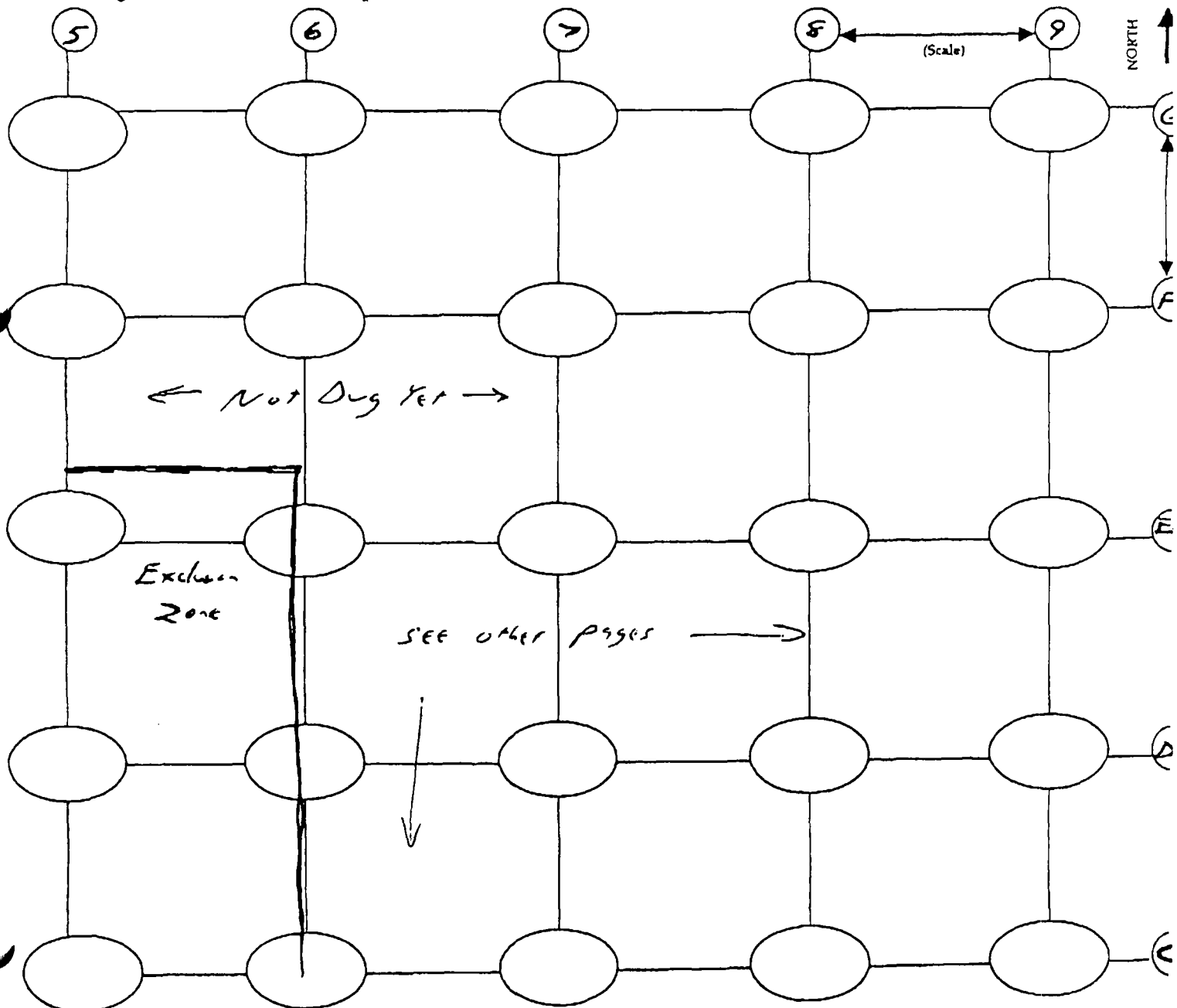
Probe Type: 1'x1"NaI / 2'x2"NaI
Shielded / Not Shielded

Lift Elevation 5.1500

Background 5300 cpm

Action Level 20509 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





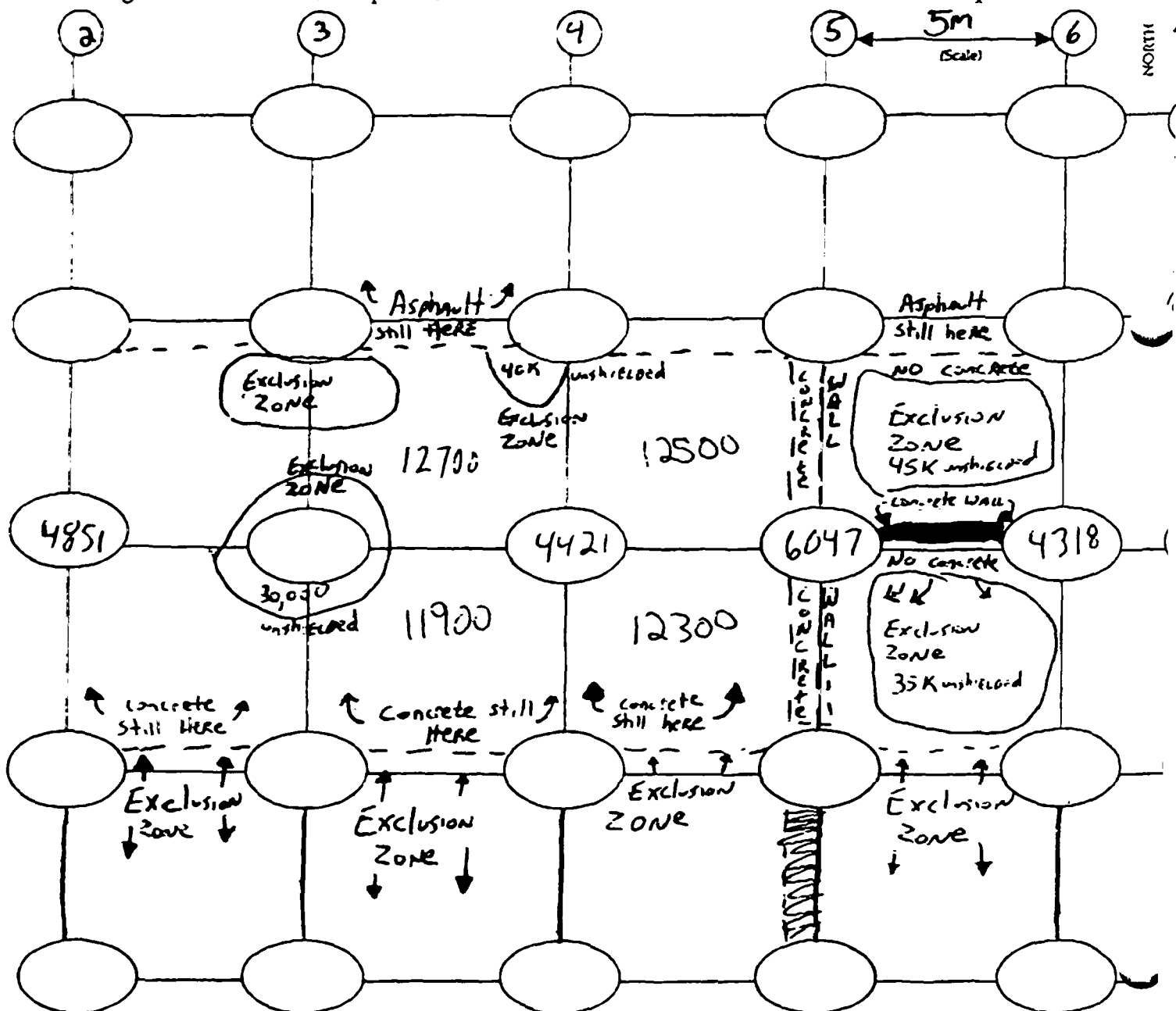
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd.

Date 6-17-06Technician Justin HubbertInst. Model Ludlum 3321Serial No. 126497Serial No. 171991Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not ShieldedLift Elevation SurfaceBackground 5400 cpm Action Level 22523 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 2

STS Consultants Ltd.

Date 6/21/02

Technician I D Smith

Inst. Model Ludlum 2221

Serial No. Meter 126496 / Probe 168143

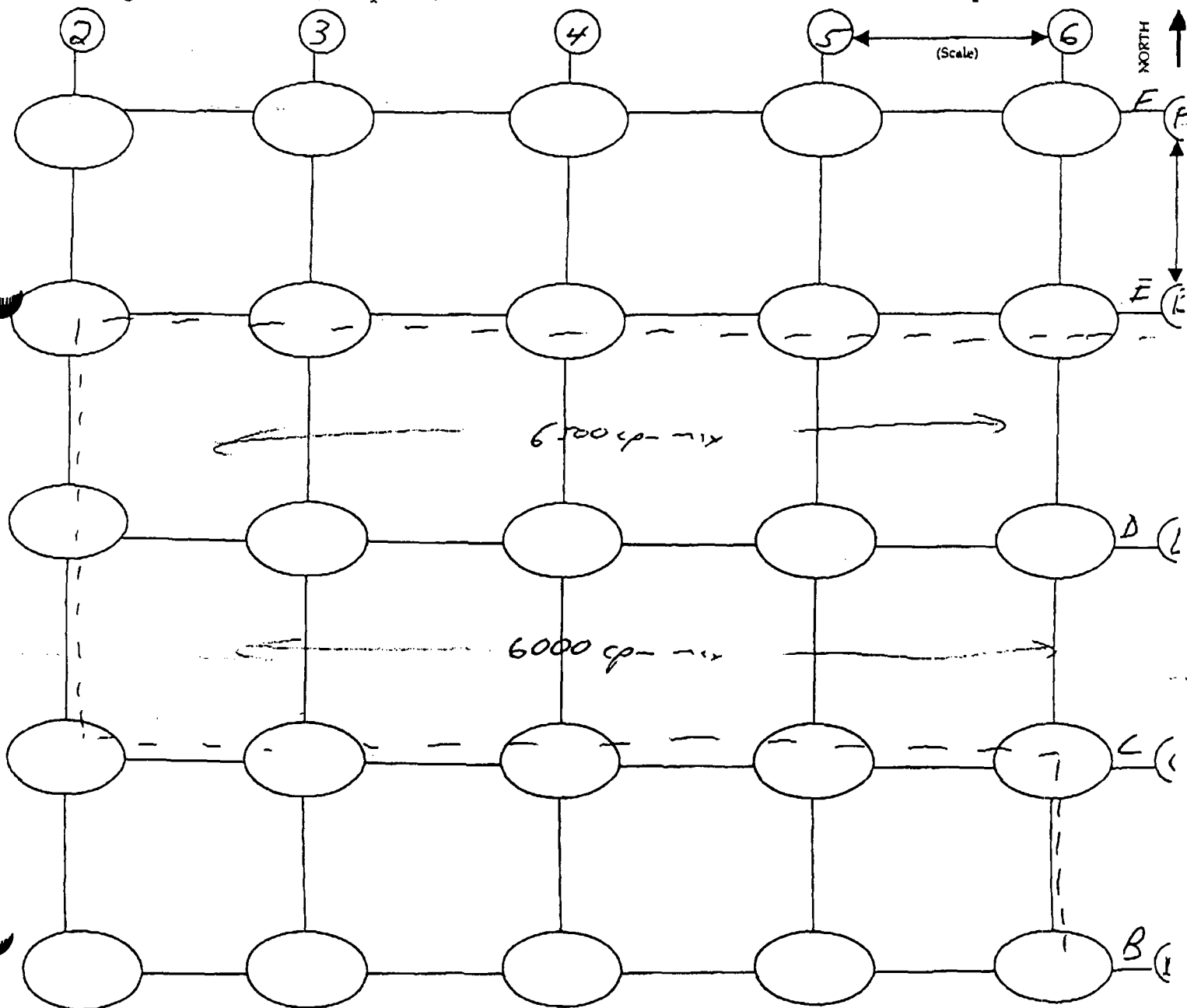
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Exclusion zone Pre EPA

Background 2,200 - 4,600 cpm

Action Level 6,988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 2

STS Consultants, Ltd

Date 6/21/02

Technician L. Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143 ^{Price}

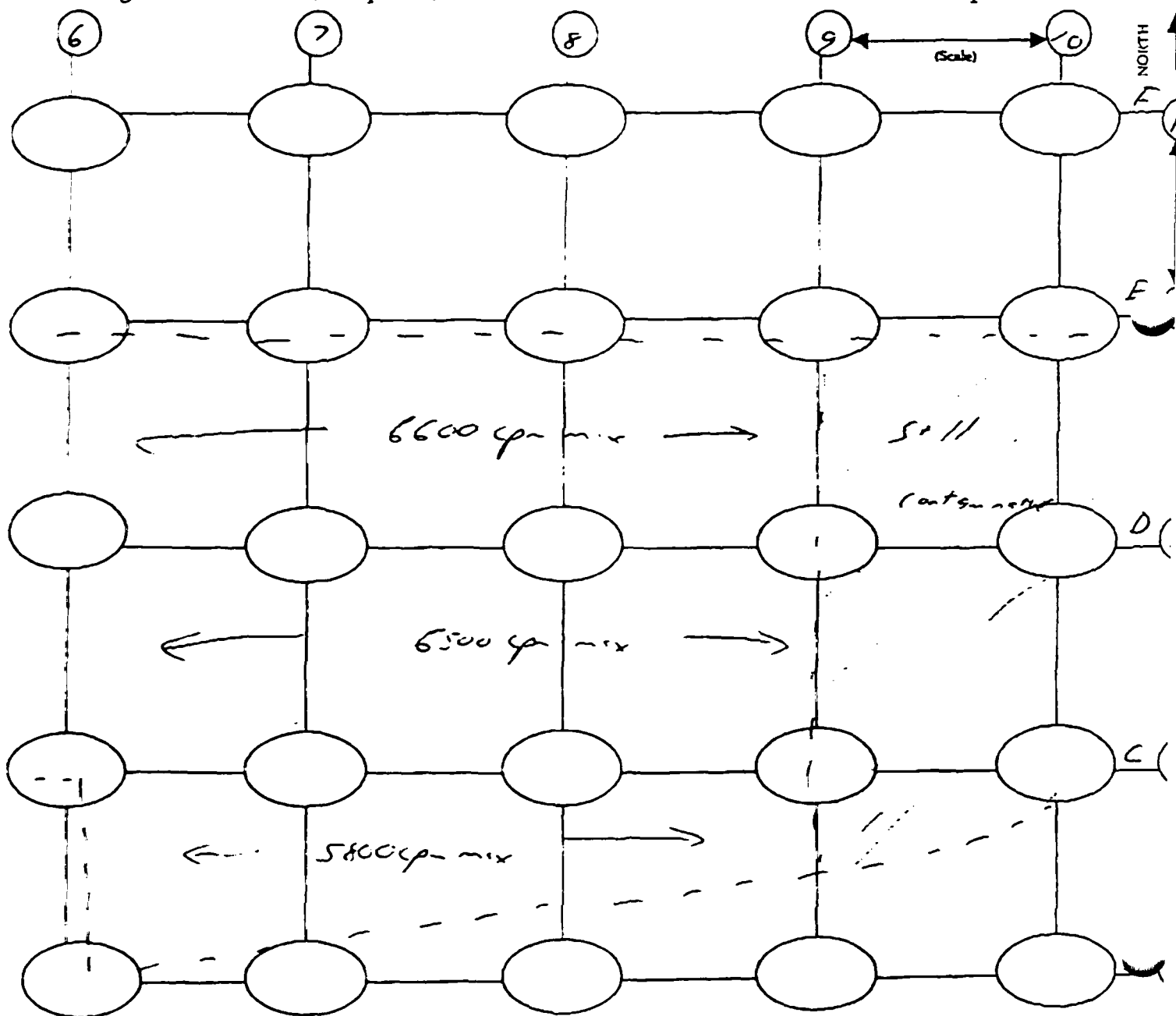
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Enduron 2001 Pk EPA

Background 2200 - 4600 cpm

Action Level 6988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-KT

Project Name GMO

Page 11 of 18

State of Illinois Ltd

Date 7-25-02

Technician LO J. H.

Inst Model Letlvm 2221

Serial No. 126196 / 168193

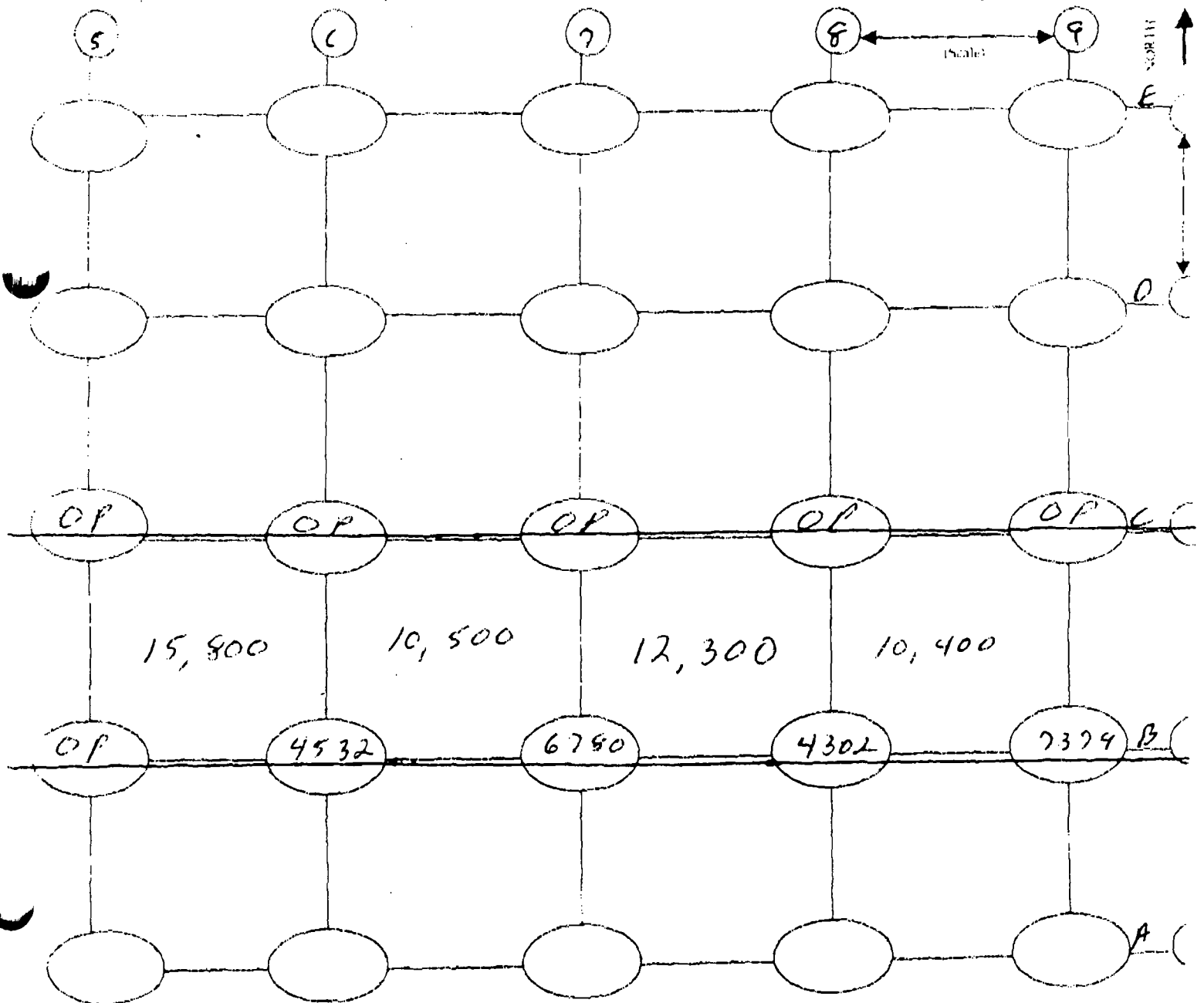
Probe Type 1x1" NaI / 2x2" NaI
Shielded Not Shielded

Lift Elevation -4.5'

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm



= excavated as exclusion zone
or other purpose



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 12 of 18

STS Consultants Ltd.

Date 7-25-02

Technician TD L-H

Inst. Model Lublu 2221

Serial No. meter 126496 / probe 168143

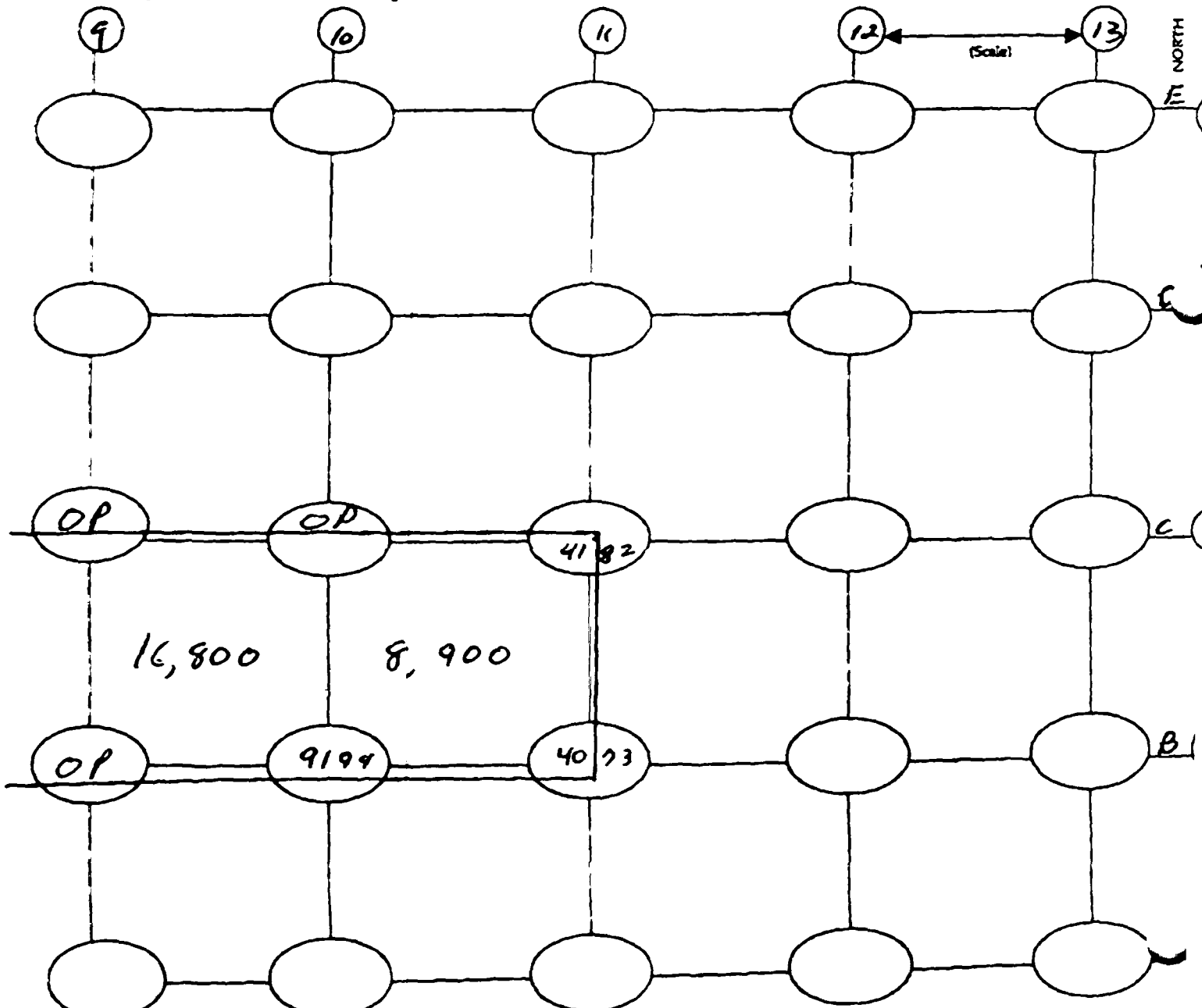
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= excavated as exclusion zone
Dec 0



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 13 of 18

STS Consultants, Ltd.

Date 7-25-02

Technician L D Smith

Inst. Model Ludlum 2221

meter Probe
Serial No. 126496 / 168143

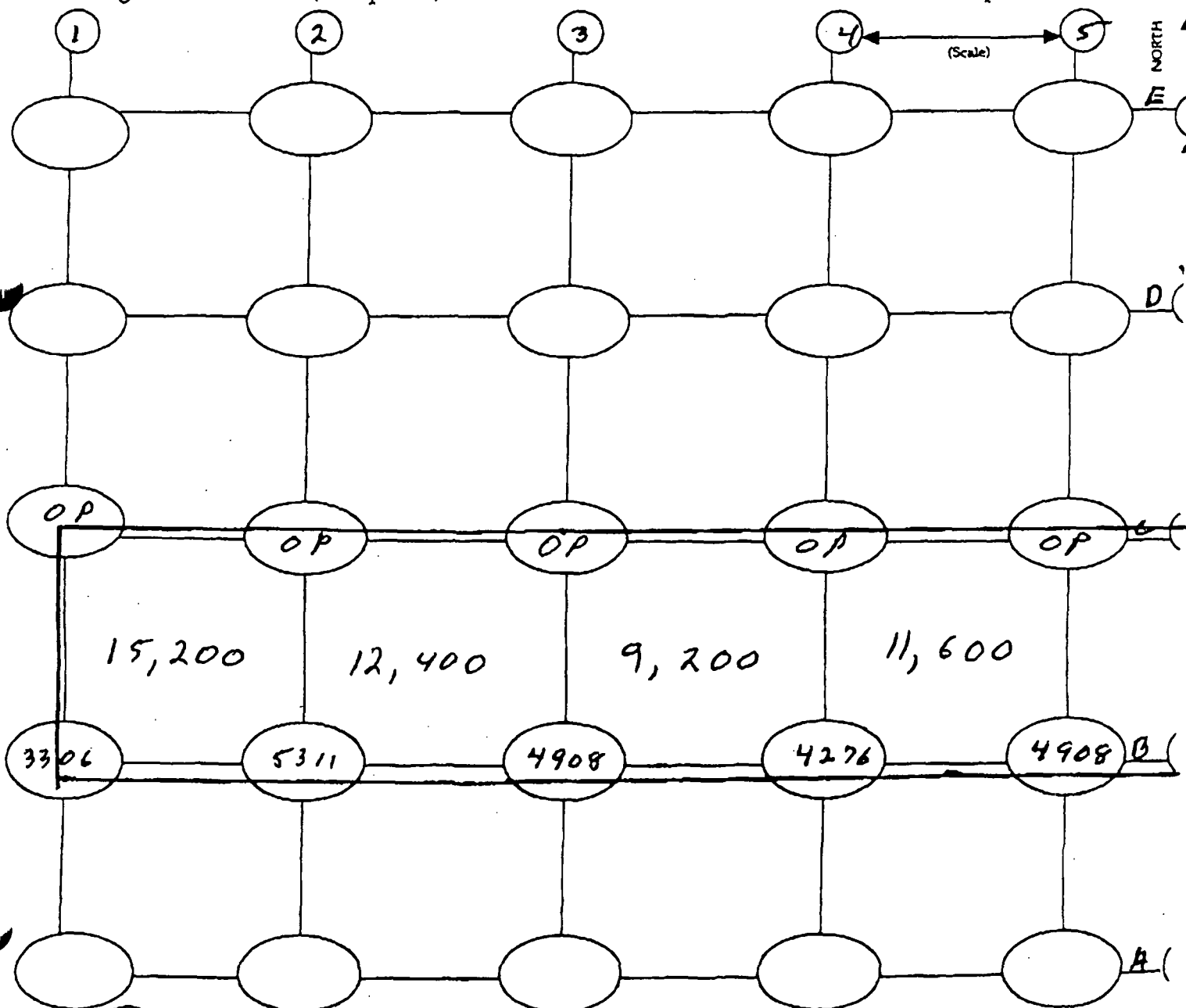
Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation -6'

Background 4A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone
OP = Occupational Presence



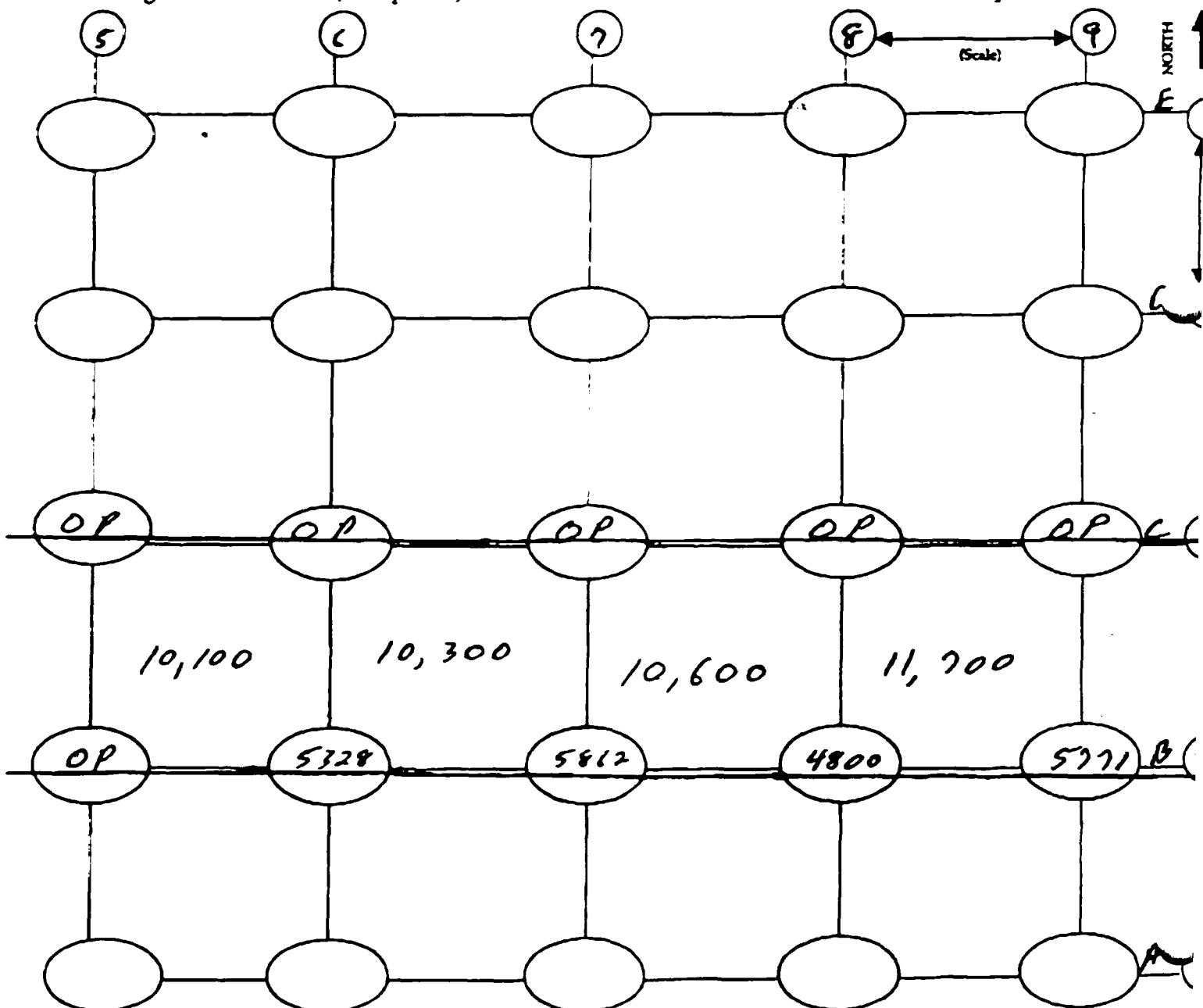
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 14 of 18

STS Consultants, Ltd.

Date 7-25-02Technician LD LintInst. Model Ludlum 2221Serial No. meter / Probe
126496 / 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 4k - 8k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone
OP = Off or Page



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 15 of 18

Date 7-25-02

Technician LD L. W.

Inst. Model Lutron 2221

Serial No. meter 126496 / probe 168143

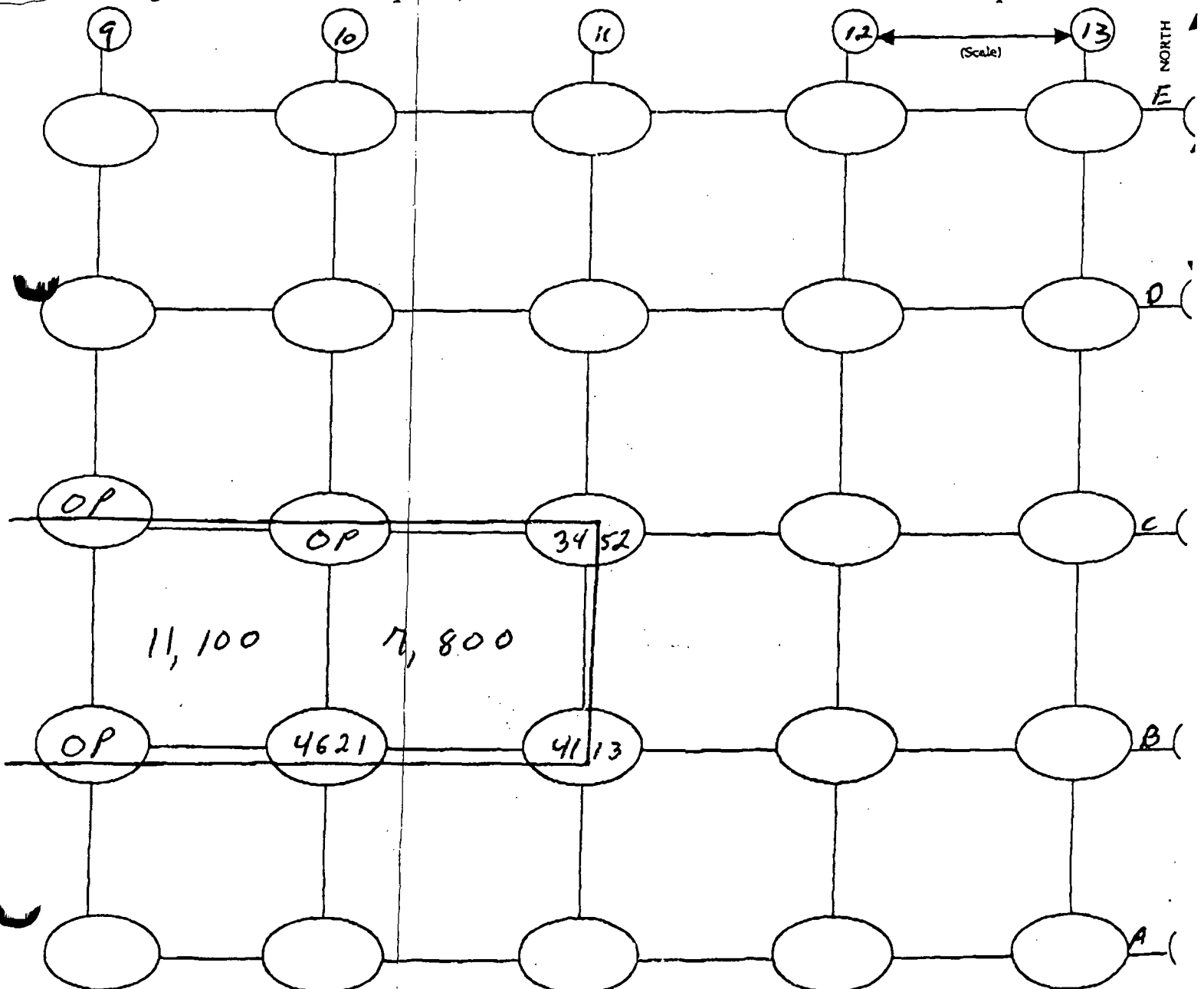
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = Excavator as exclusion zone
OP = Other Page



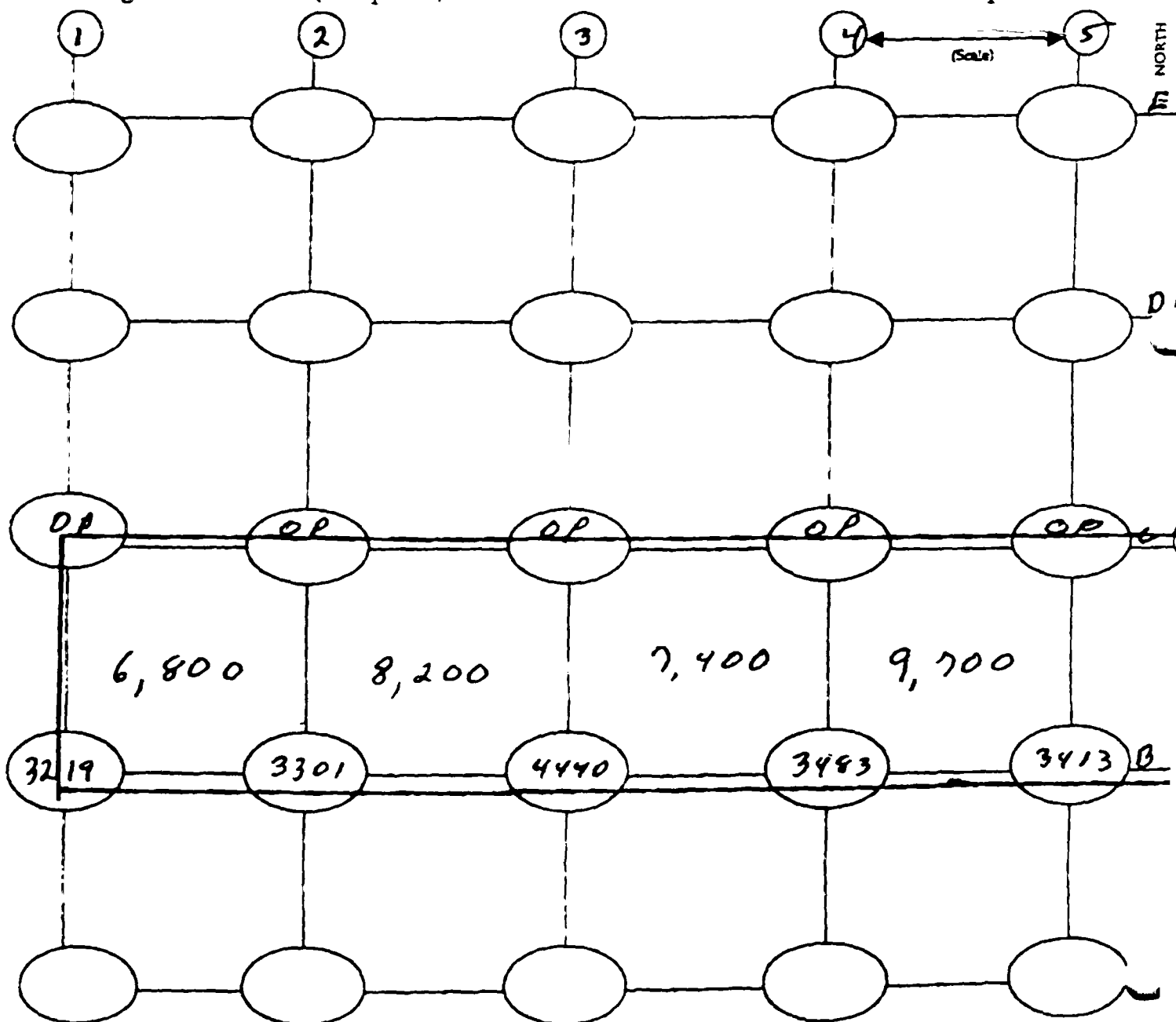
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 16 of 18

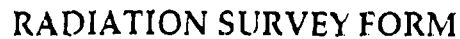
STS Consultants, Ltd.

Date 7-25-02Technician LD SmithInst. Model Ludlum 2221Serial No. meter 126496 / Probe 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded ☒ Not ShieldedLift Elevation -7.5'Background 4A-8A cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone
cpm - max 1000





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 18 of 18

STS Consultants Ltd

Date 7-25-02

Technician TD S. Th

Inst. Model Lutlum 2221

Serial No. meter 126496 / probe 168143

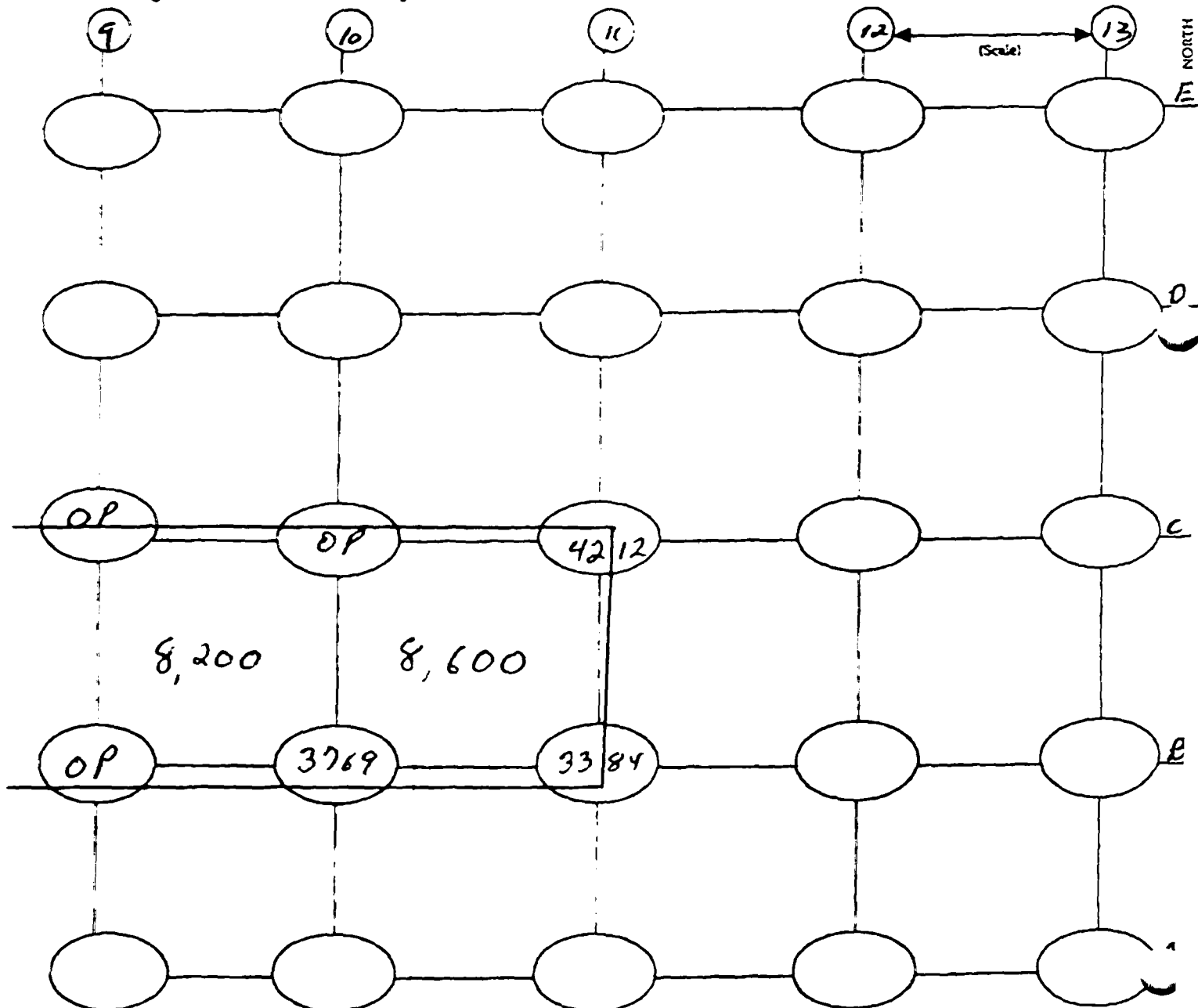
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 4k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone
OP = Other face



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician L D Smith

Inst. Model Ludlum 2221

meter / Probe
Serial No. 126496 / 168143

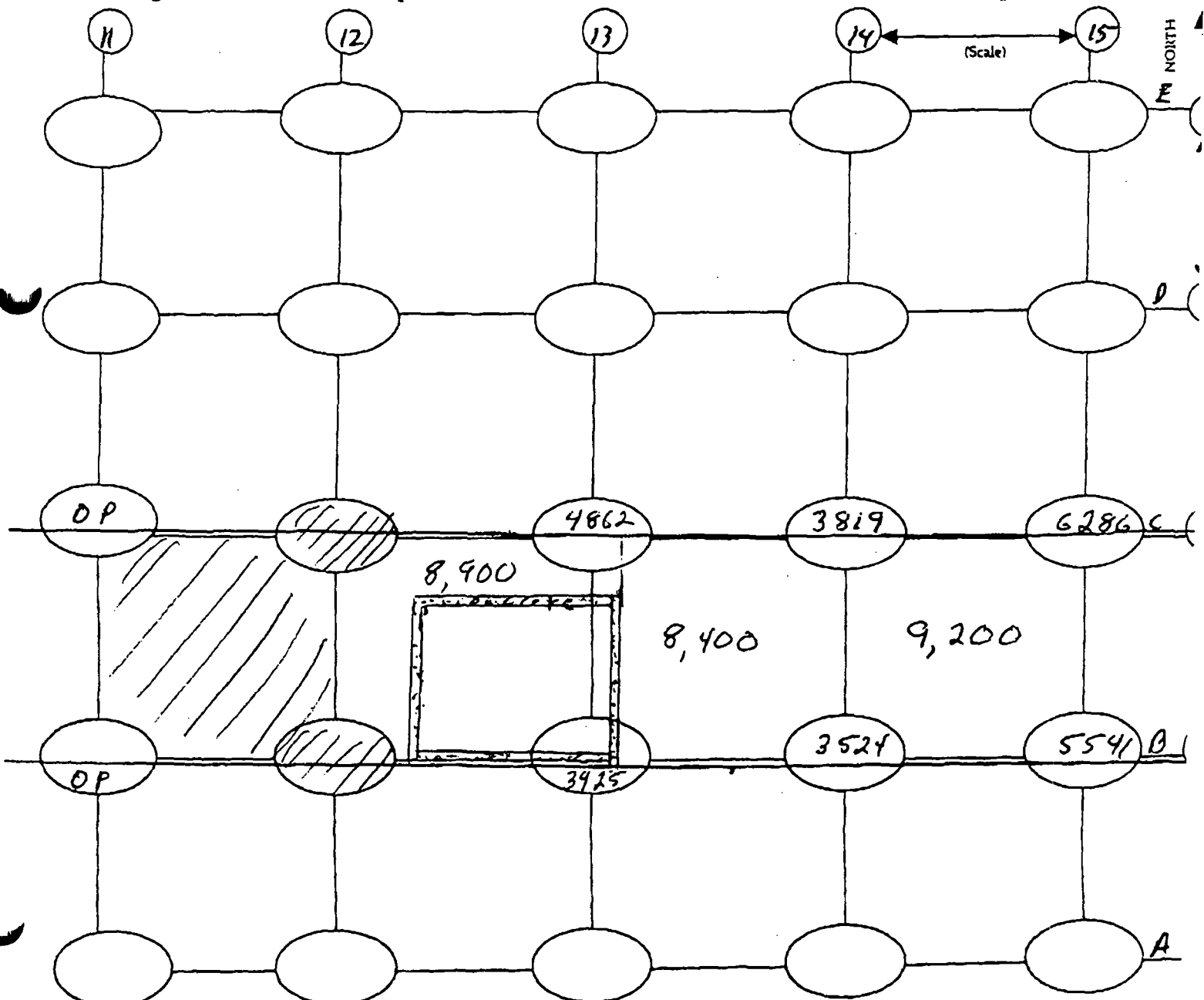
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 24 - 104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone
 = Exclusion Zone Boundary
ND - other Page



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician 2 D Smith

Inst. Model Ludlum 2221

Serial No. meter probe 126496/168143

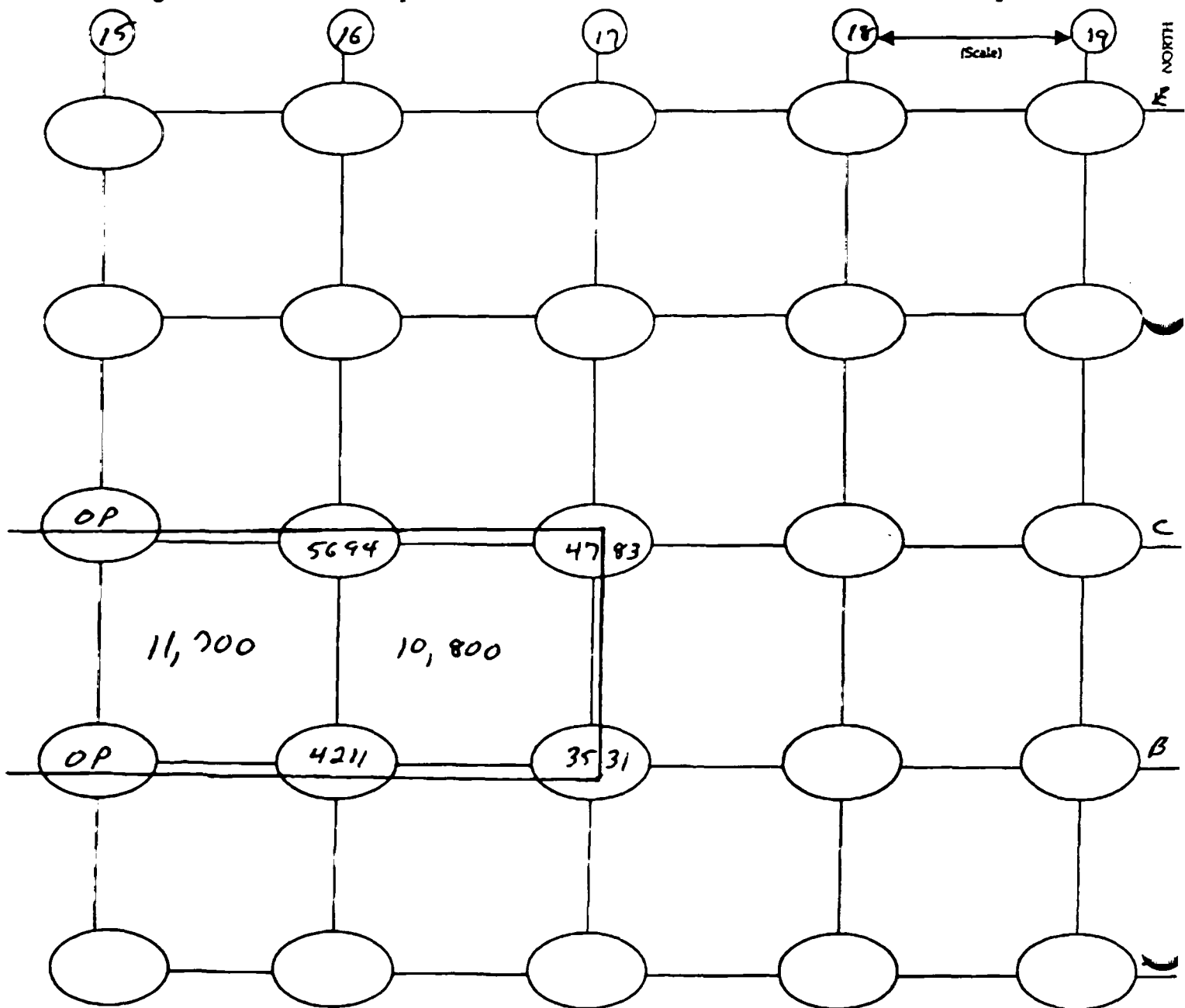
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation Surface

Background 24-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





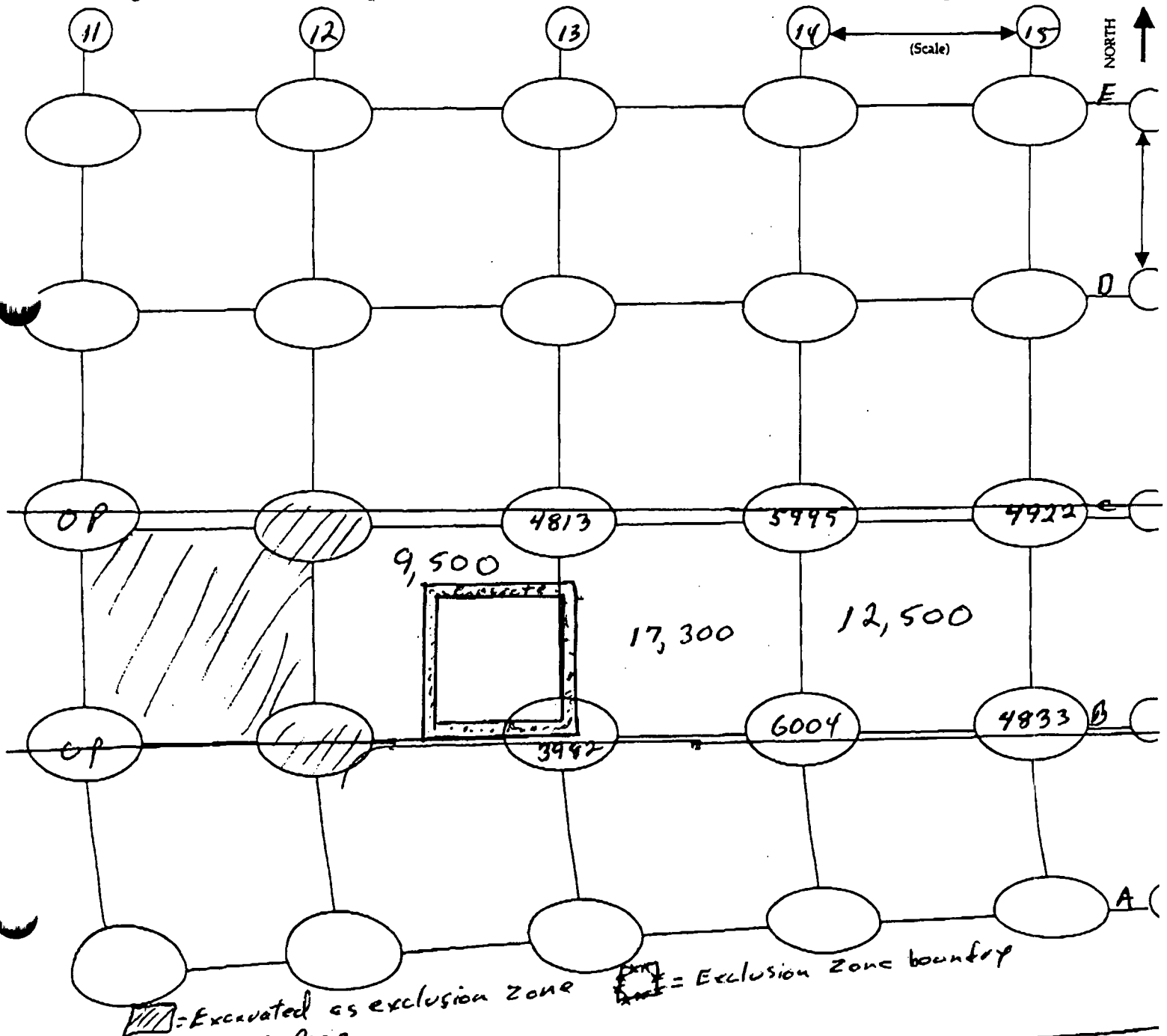
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 14

STS Consultants, Ltd.

Date 7-26-02Technician LO SmithInst. Model Lucilon 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI 2"x2" NaI
Shielded Not ShieldedLift Elevation -1.5'Background 24-106 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





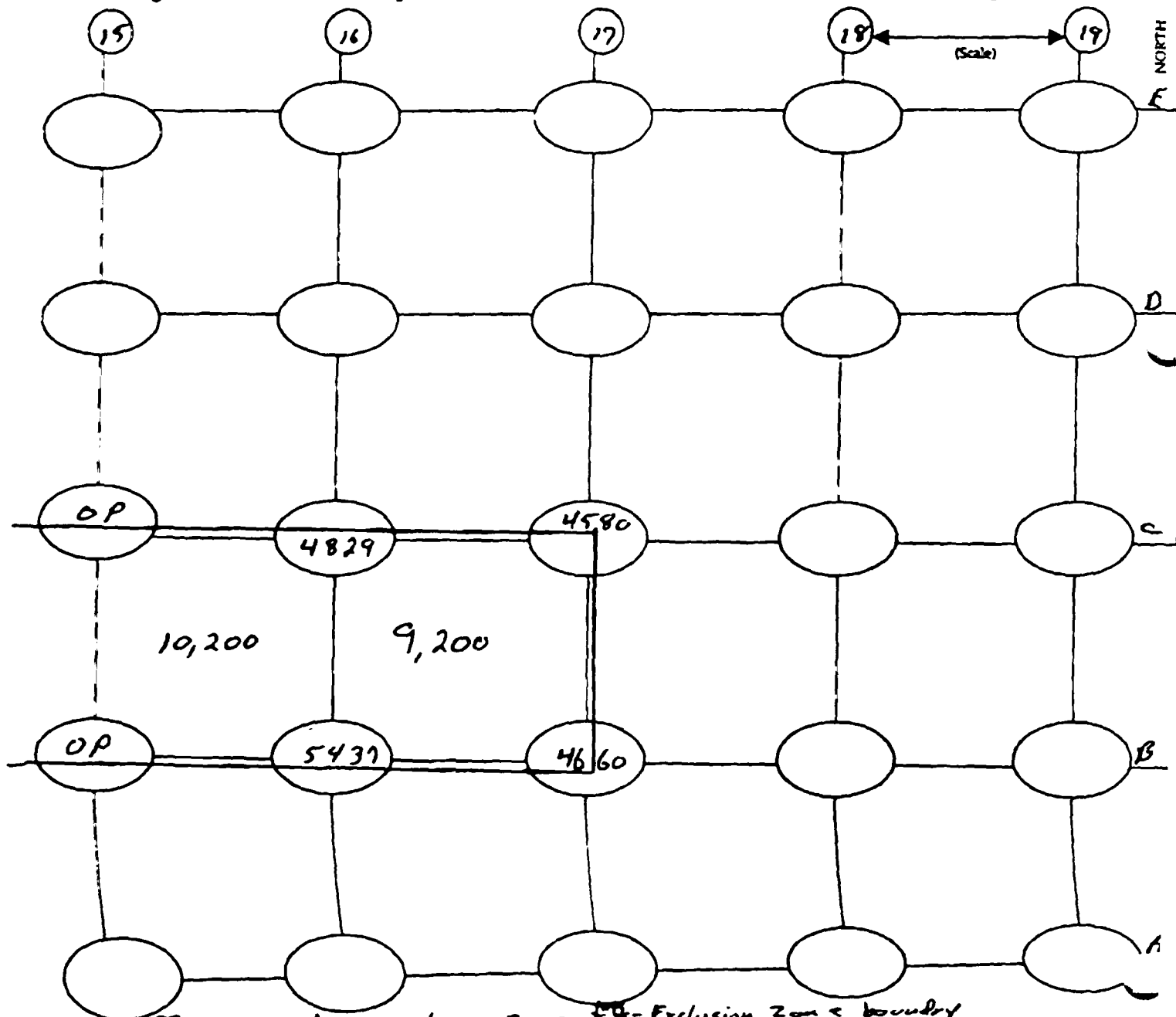
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 14

STS Consultants, Ltd.

Date 7-26-02Technician L B SmithInst. Model LoDum 2221Serial No. 126496 / 168193Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 2k-10k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



■ = Excavated as exclusion zone EX = Exclusion zone boundary
... = Not Area



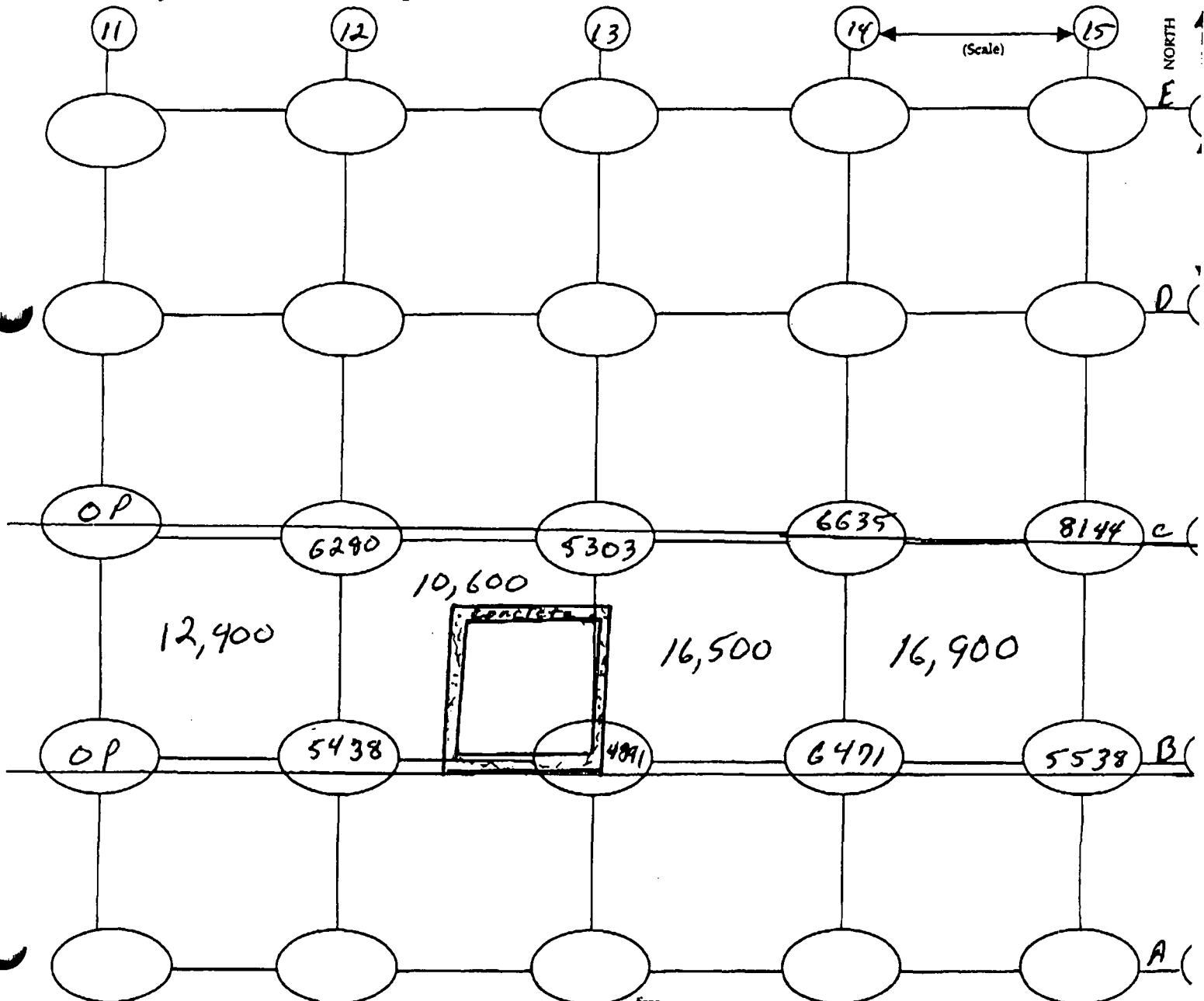
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 14

STS Consultants, Ltd.

Date 7-26-02Technician L D SmithInst. Model Edlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 2k-10k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as exclusion zone Exclusion Zone boundary

OP = Other Page



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician LO Smith

Inst. Model Lucium 2221

meter Probe
Serial No. 126496/168193

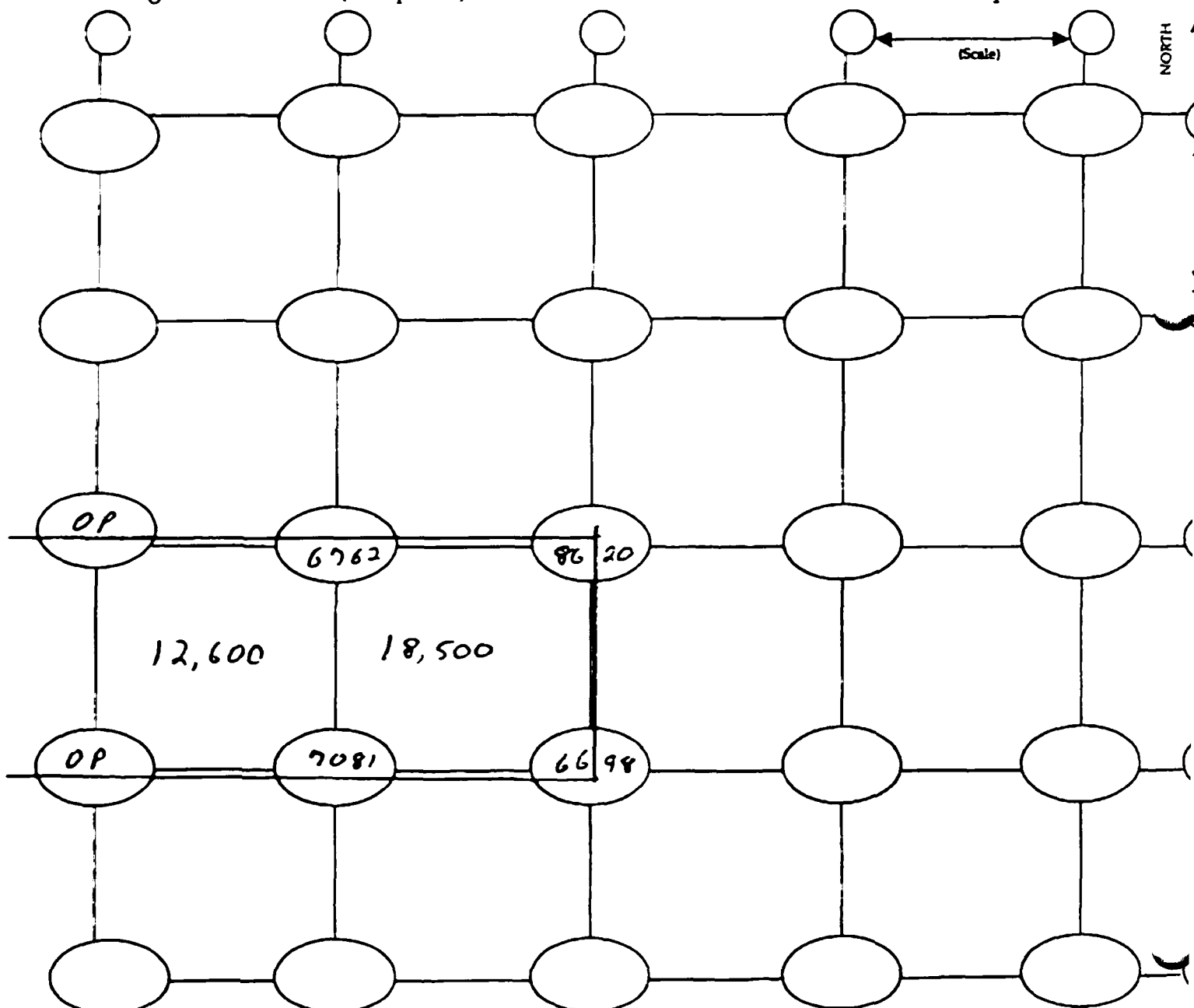
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 2k-10k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone = Exclusion Zone boundary
OP = Other Page

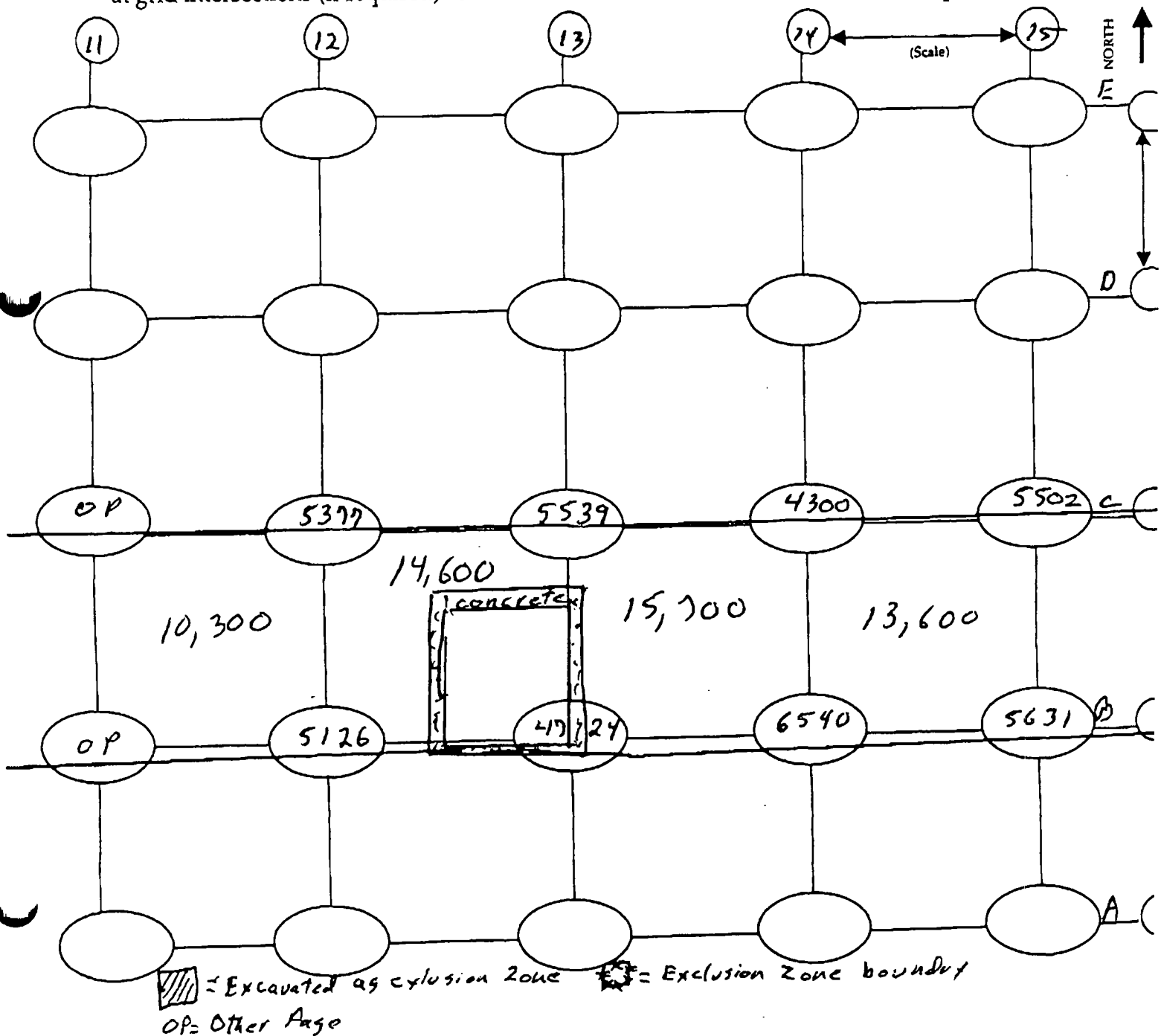


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 7 of 14Date 7-26-02Technician LD SmithInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded ☒ Not ShieldedLift Elevation -4.5'Background 24-104 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 8 of 14

STS Consultants Ltd.

Date

7-26-02

Technician

2 D Smith
meter probe

Inst. Model

Lucium 2221

Serial No.

126496/168143

Probe Type:

1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation

-4.5'

Background

2k-10k

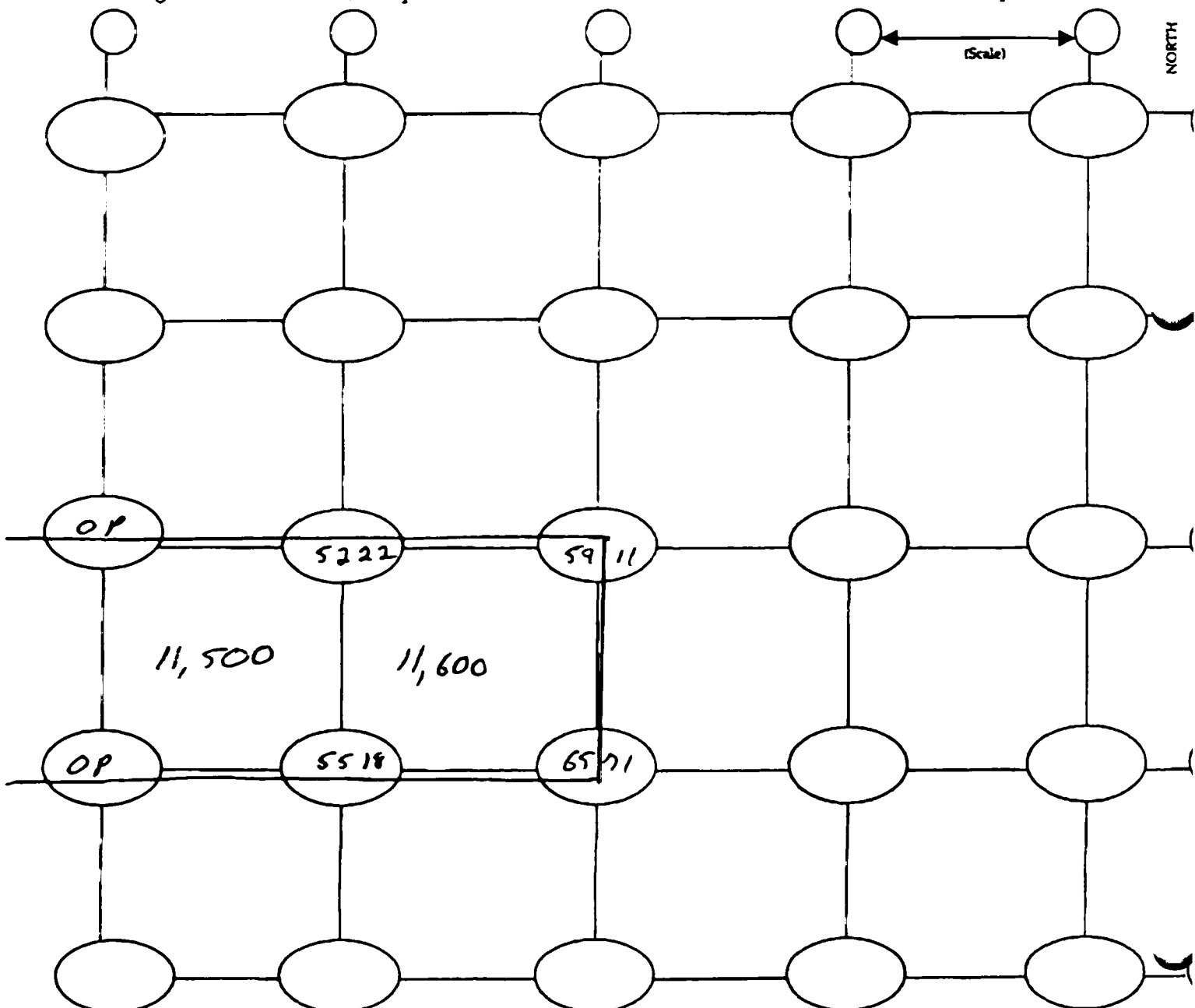
cpm

Action Level

20,680

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



▨ = Excavated as exclusion zone * = Exclusion zone boundary
OP = Other Page



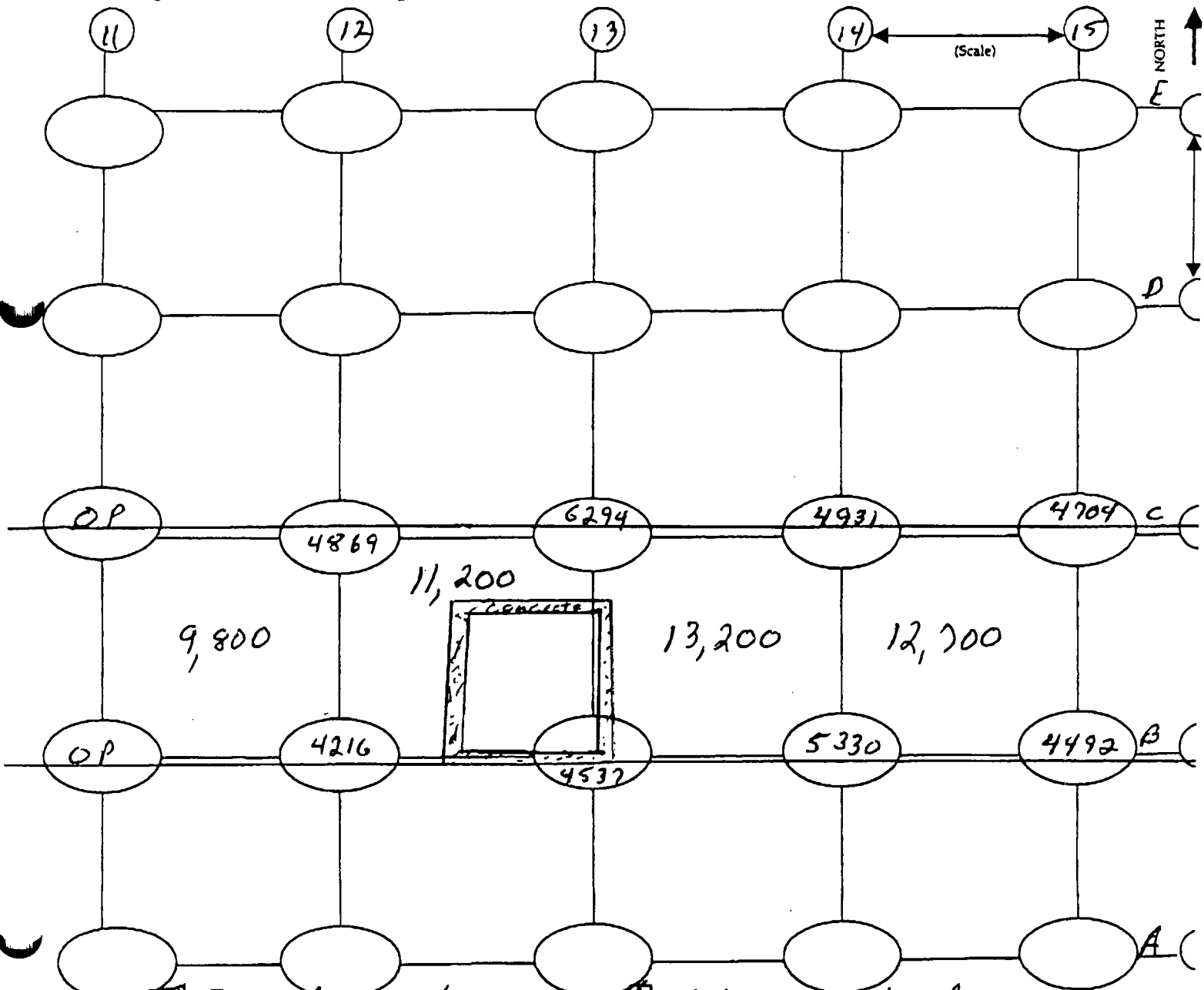
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 9 of 14

STS Consultants, Ltd.

Date 7-26-02Technician L D SmithInst. Model Ludlum 2221Serial No. meter 126496 / Probe 168143Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not ShieldedLift Elevation - 6'Background 2 k-10k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



/// = Excavated as exclusion zone ⊠ = Exclusion zone boundary
OP = Other Page



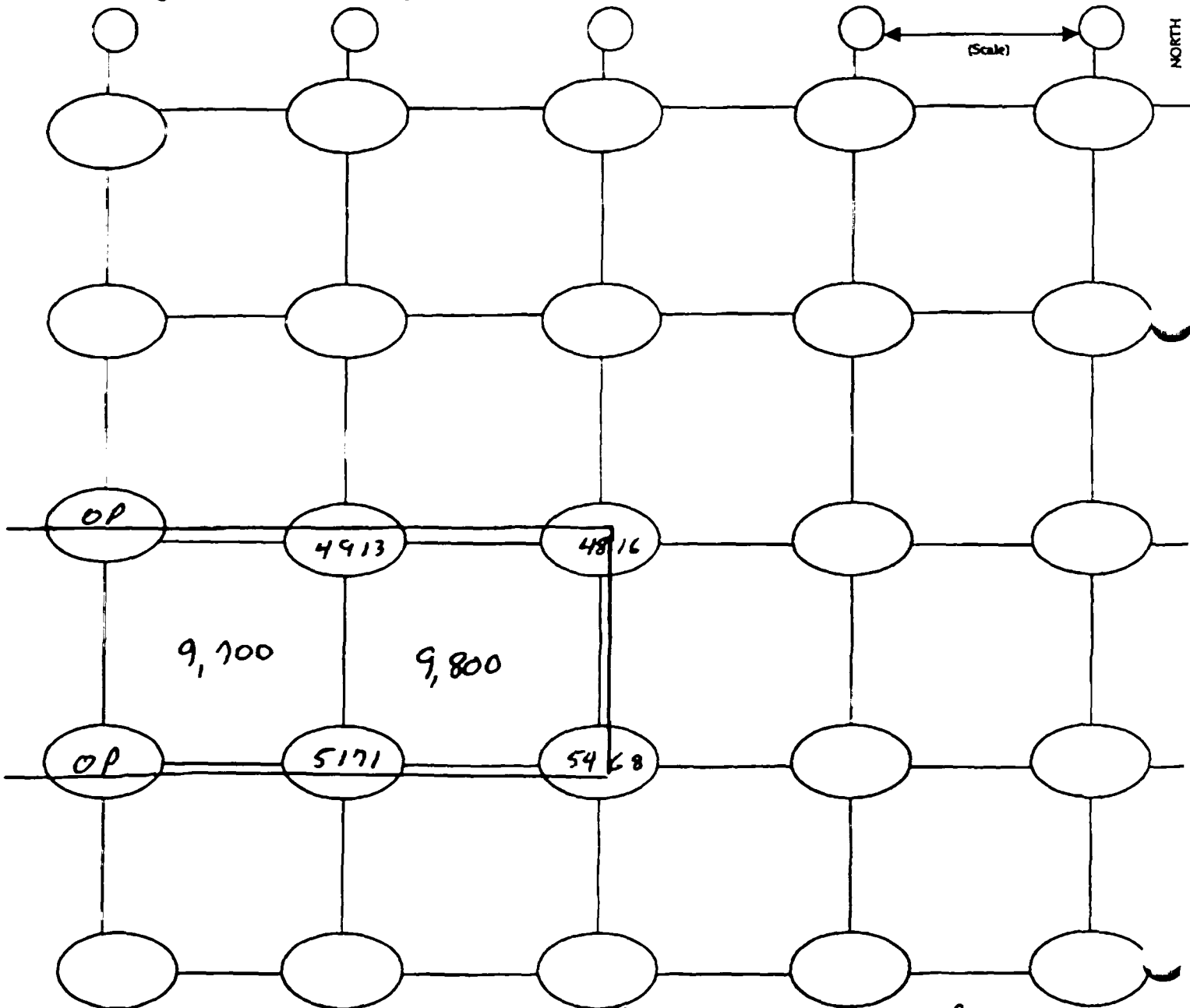
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 10 of 14

STS Consultants, Ltd.

Date 7-26-02Technician L D SmithInst. Model Lullom 2221Serial No. 126496 / 168143Probe Type: 1"x1" NaI 2"x2" NaI
Shielded ☒ Not ShieldedLift Elevation -6'Background 2k-104 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone = Exclusion zone boundary
OP = other page



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 11 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

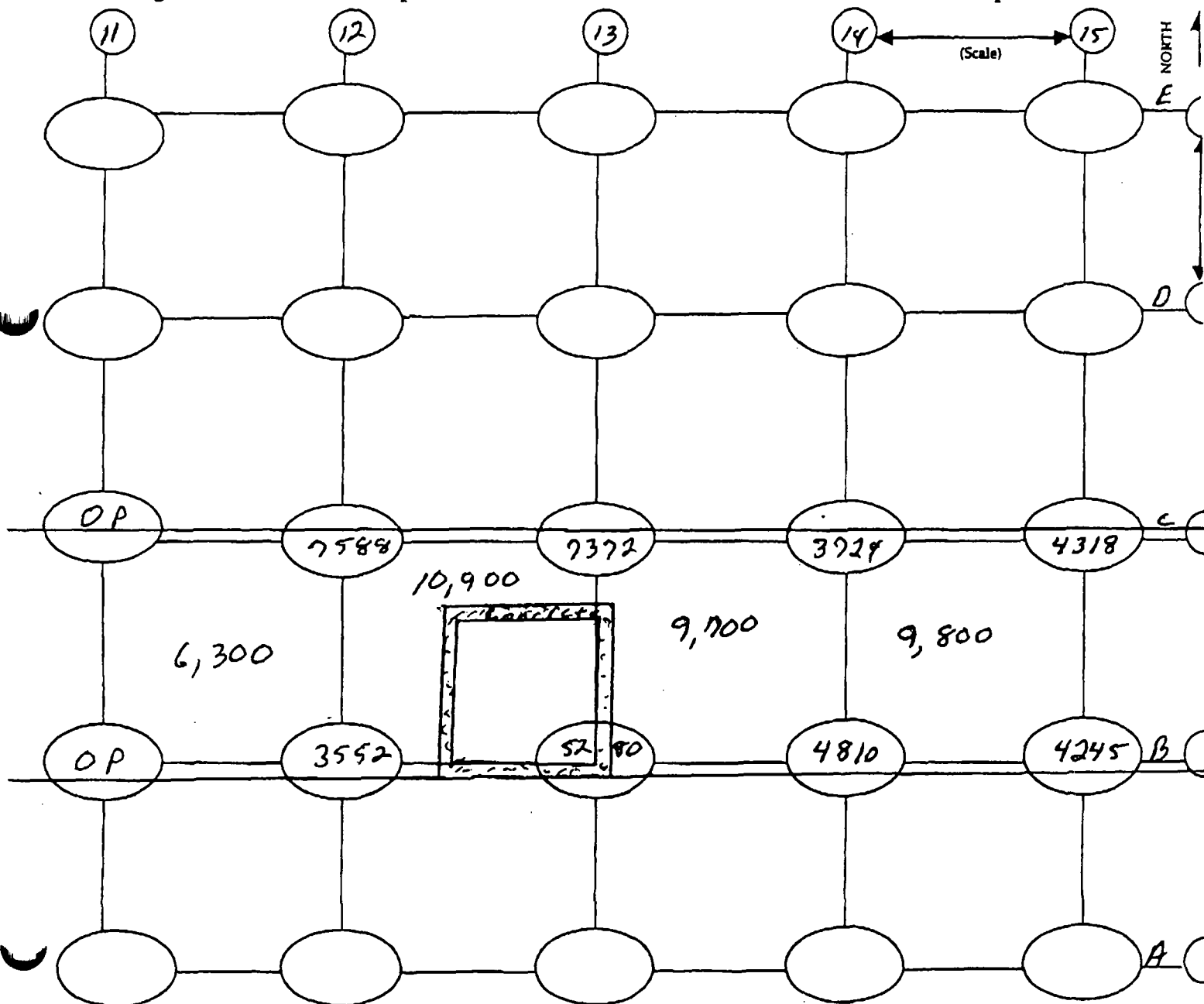
Probe Type: 1"x1" NaI
Shielded ☐ 2"x2" NaI
Not Shielded ☒

Lift Elevation - 7.5

Background 24-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





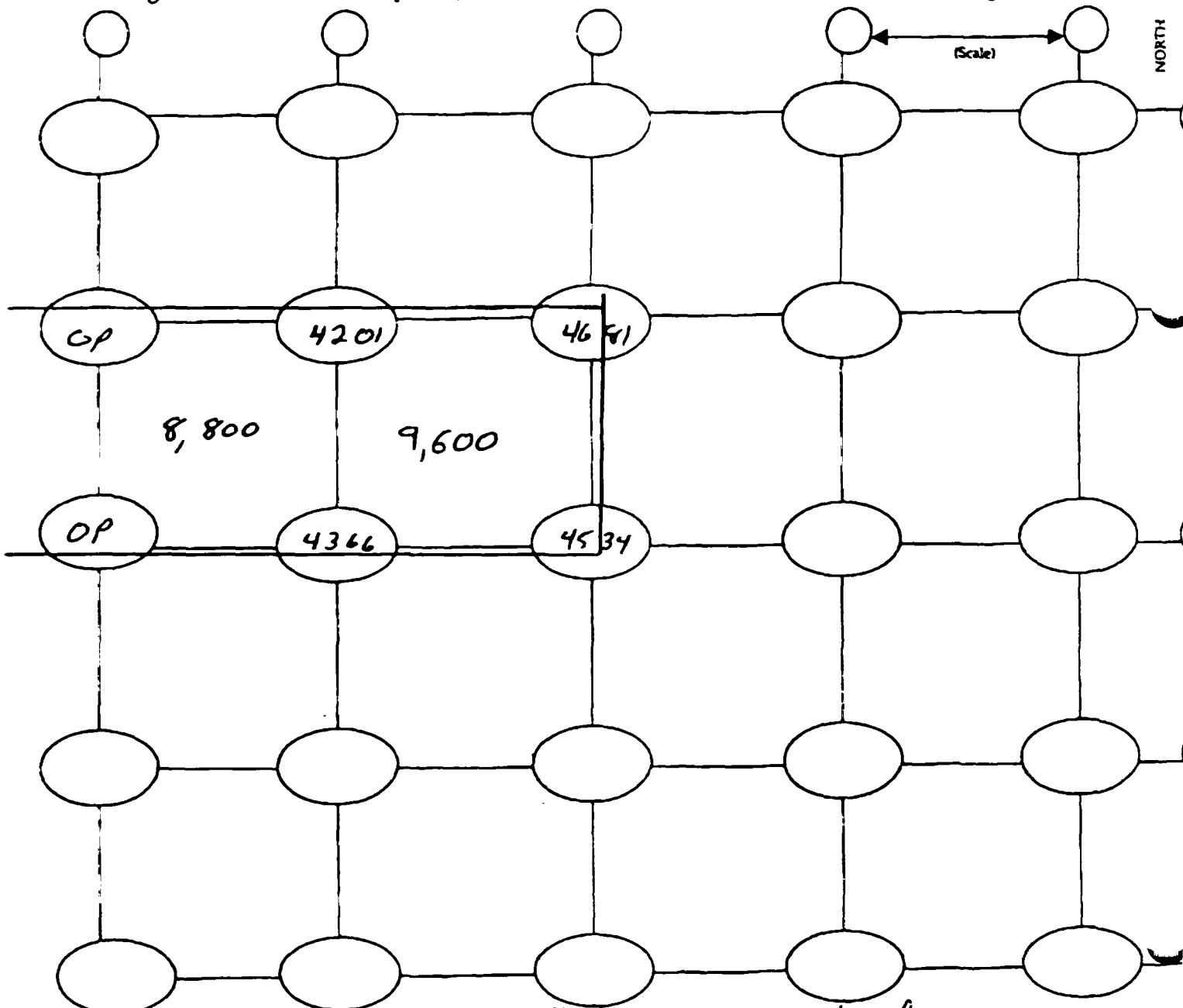
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 12 of 14

STS Consultants, Ltd.

Date 7-26-02Technician LD SmithInst. Model Ludlum 2221Serial No. meter 126496 / probe 158193Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation - 7.5'Background 24-104 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as Exclusion zone = Exclusion Zone boundary
OP = Other Page



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 13 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

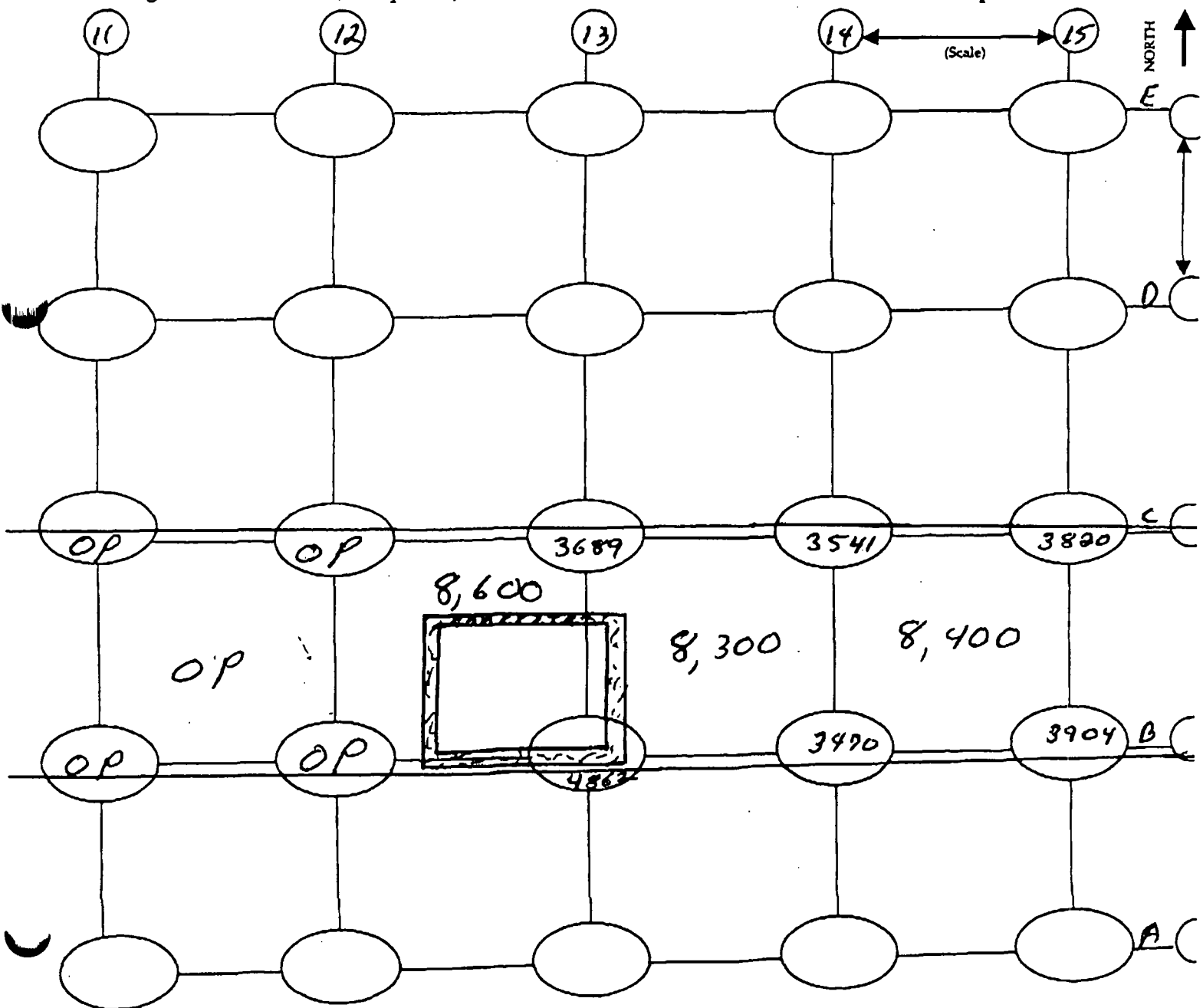
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -9'

Background 24-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 14 of 14

STS Consultants, Ltd.

Date 7-26-02

Technician LD Smith

Inst. Model Luplom 2221

Serial No. 126496/168143

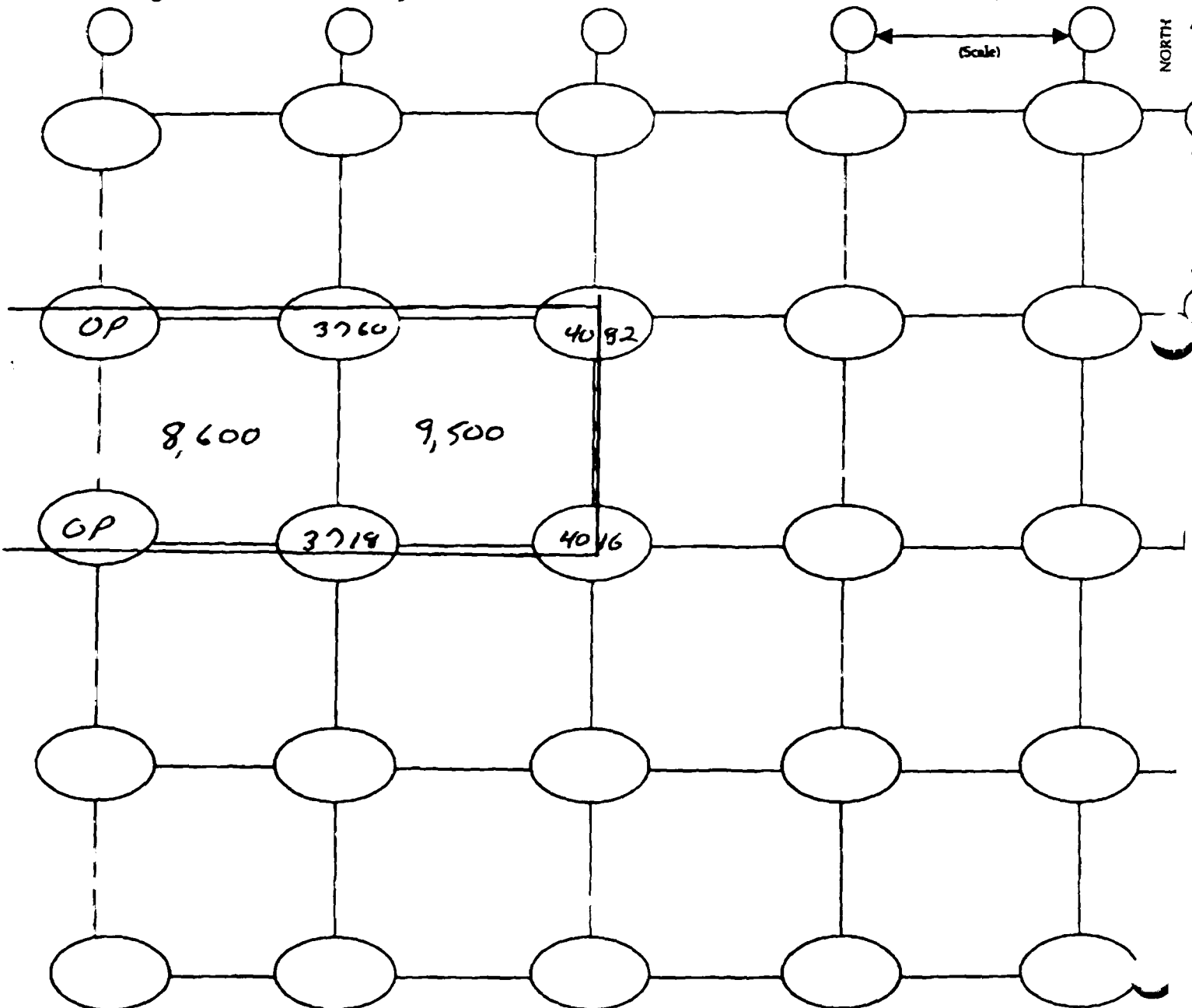
Probe Type: 1"x1" Nal ☒ 2"x2" Nal
Shielded ☒ Not Shielded

Lift Elevation -9'

Background 2k-10k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



= Excavated as exclusion zone = Exclusion zone boundary
OP = Other Page



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 7-29-02

Technician TD Smith

Inst. Model Ludlum 2221

Serial No. meter 126496 / Probe 168143

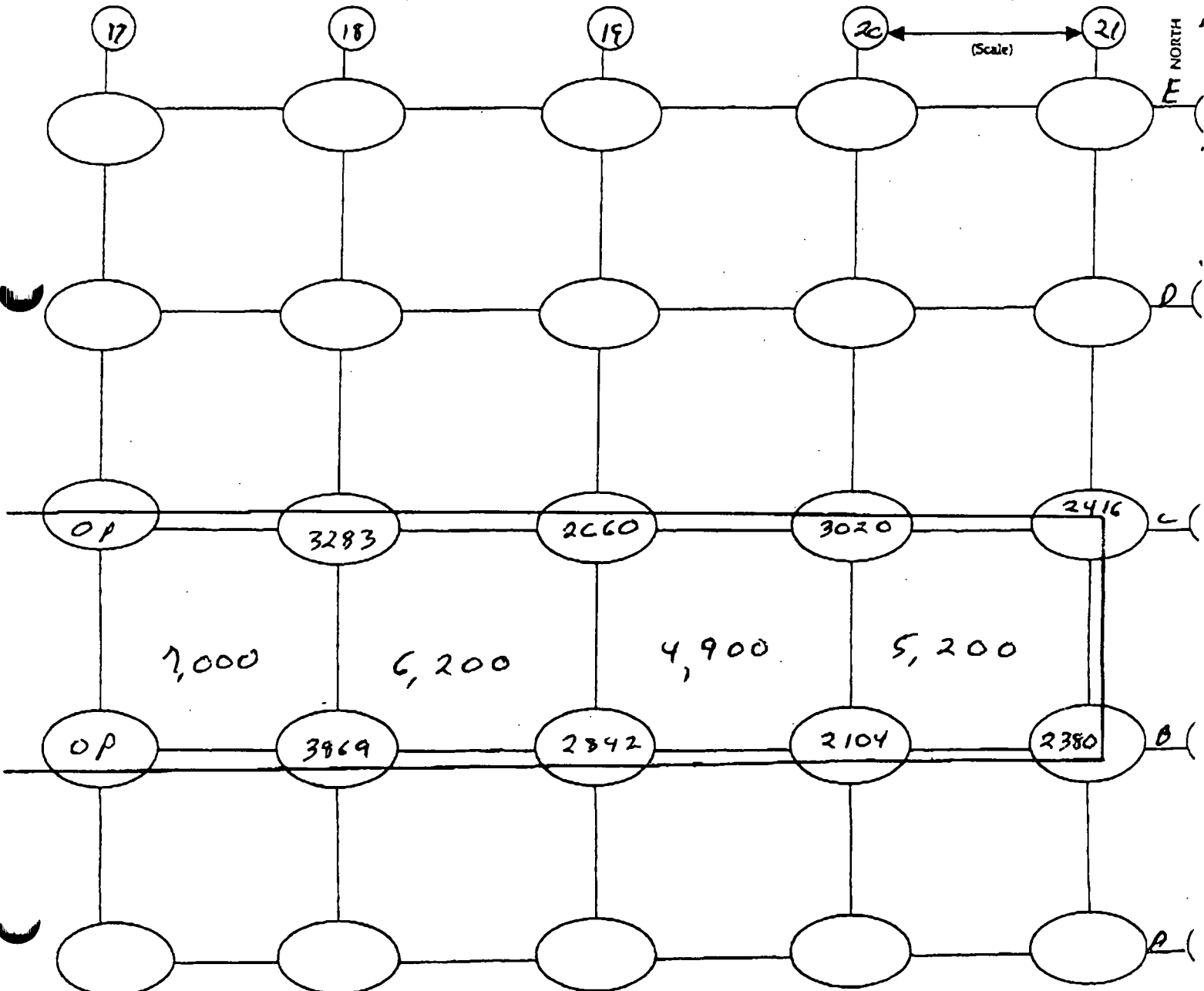
Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 2k - 6k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = Other Page



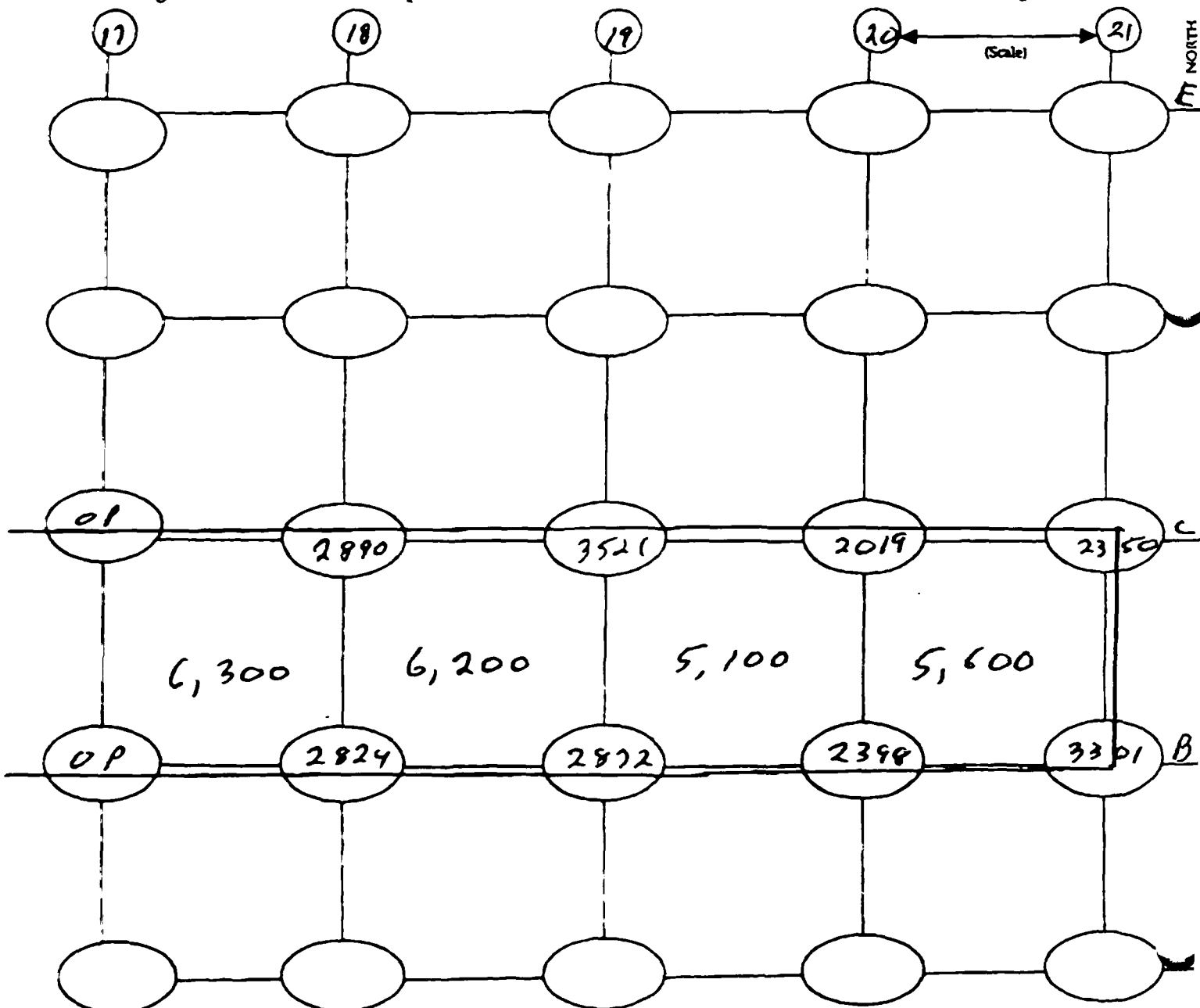
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 6

STS Consultants, Ltd.

Date 7-29-02Technician JD SmithInst. Model Ludlum 2221Serial No. 126496 / 128143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 2k - 6k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = OK or Page

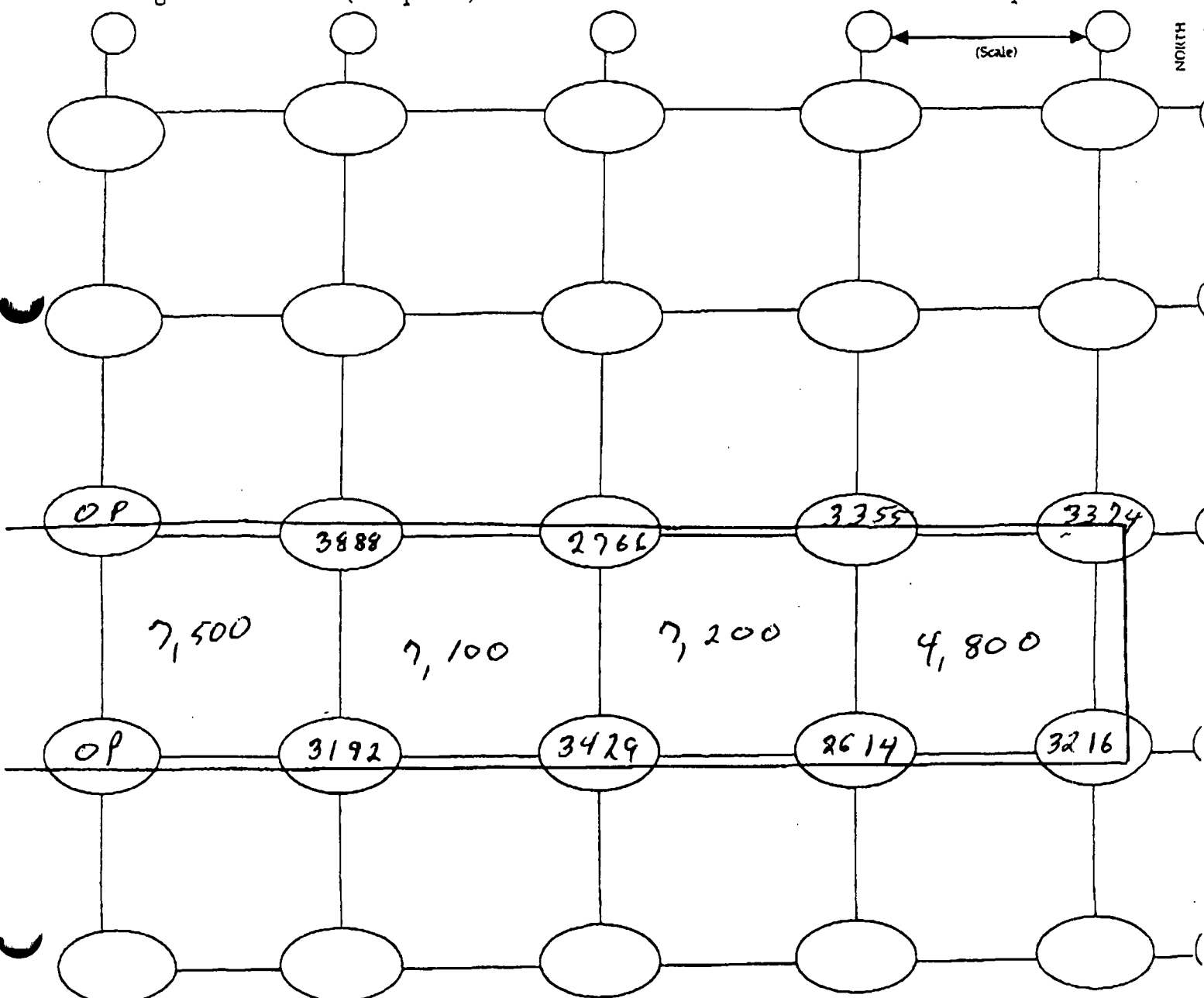


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 6Date 7-29-02Technician L D SmithInst. Model L-4100 2221Serial No. meter Probe
126496/168173Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation - 3'Background 2-k-6k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = OTR e- Rese



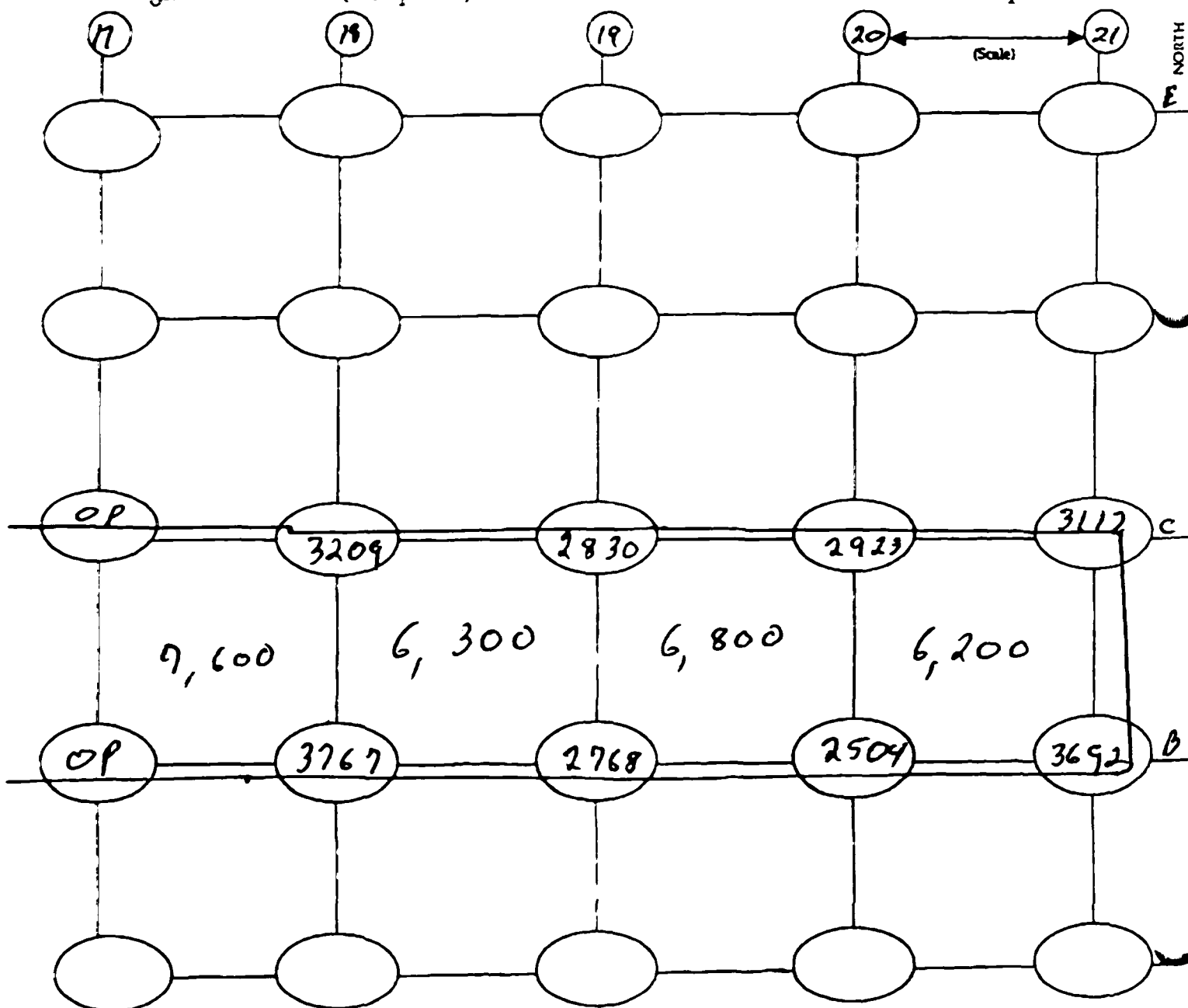
RADIATION SURVEY FORM

Project # 255BS-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd

Date 7-29-02Technician LD SmithInst. Model Cedlum 2221Serial No. meter 126496 / Probe 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 24-64 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = Other Page



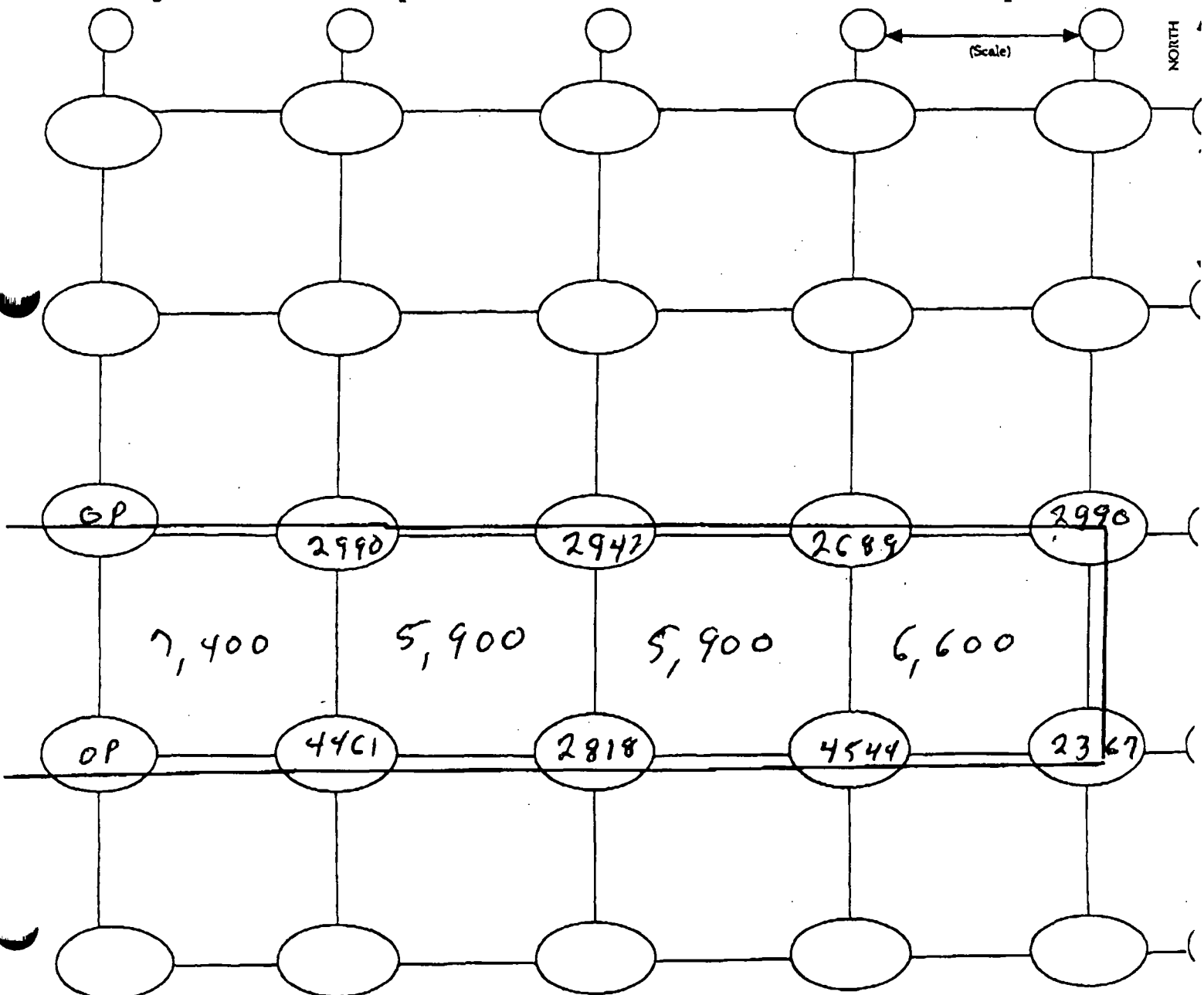
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 7-29-02Technician LD SmithInst. Model Ludlum 2221Serial No. meter 126496 / probe 1168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation - 6'Background 2 k - 6 k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



GP = Other Page



RADIATION SURVEY FORM

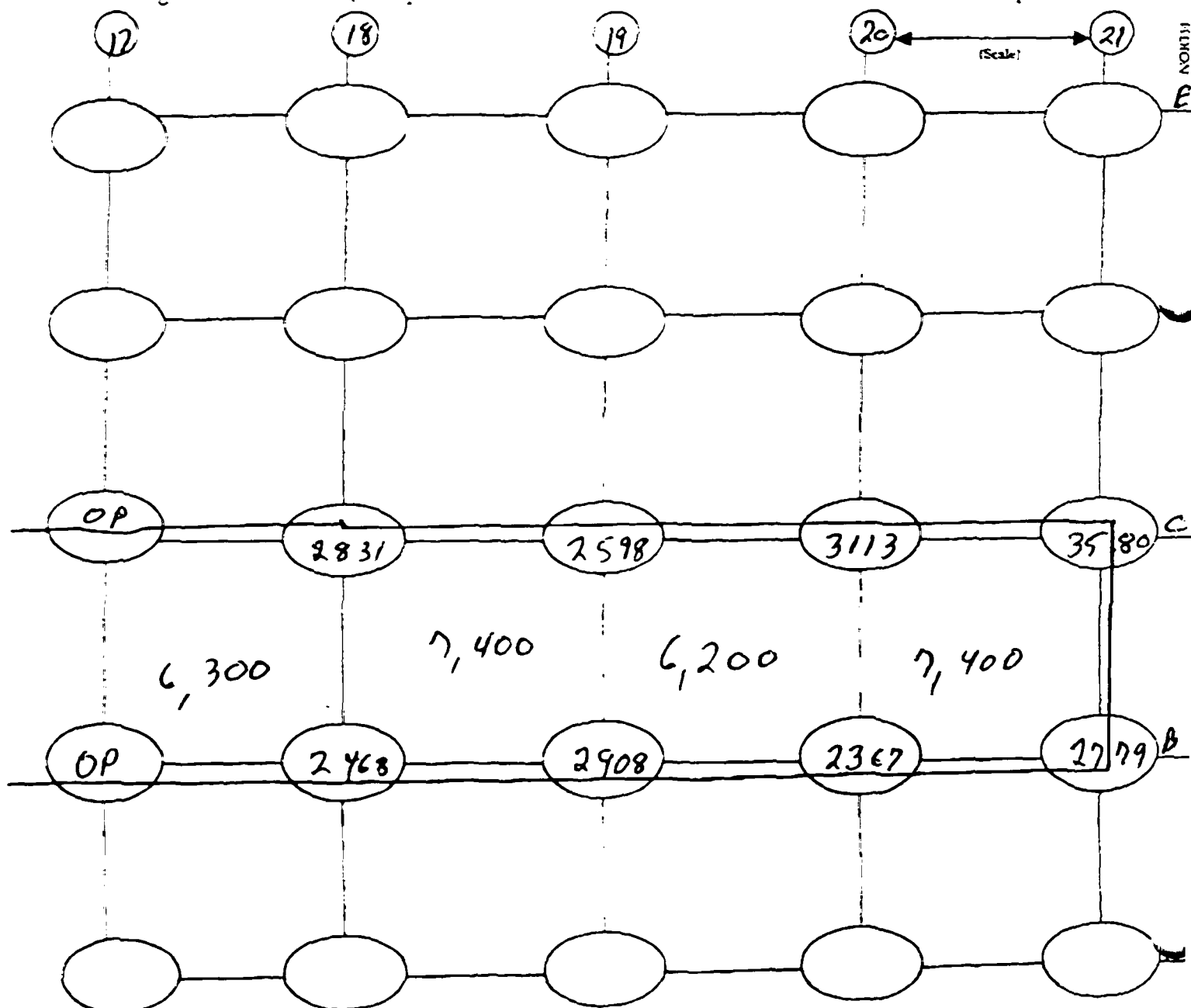
Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 7-29-02Technician J D SmithInst. Model Leadlum 2221Serial No. meter Probe
126496 / 168193Probe Type: 1x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 2k-6k cpm

Action Level _____ cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



OP = Other Page



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd.

Date 7-31-02

Technician Justin Hubbert
model # PROBE #

Inst. Model Ludlum 2221

Serial No. 132844 168148

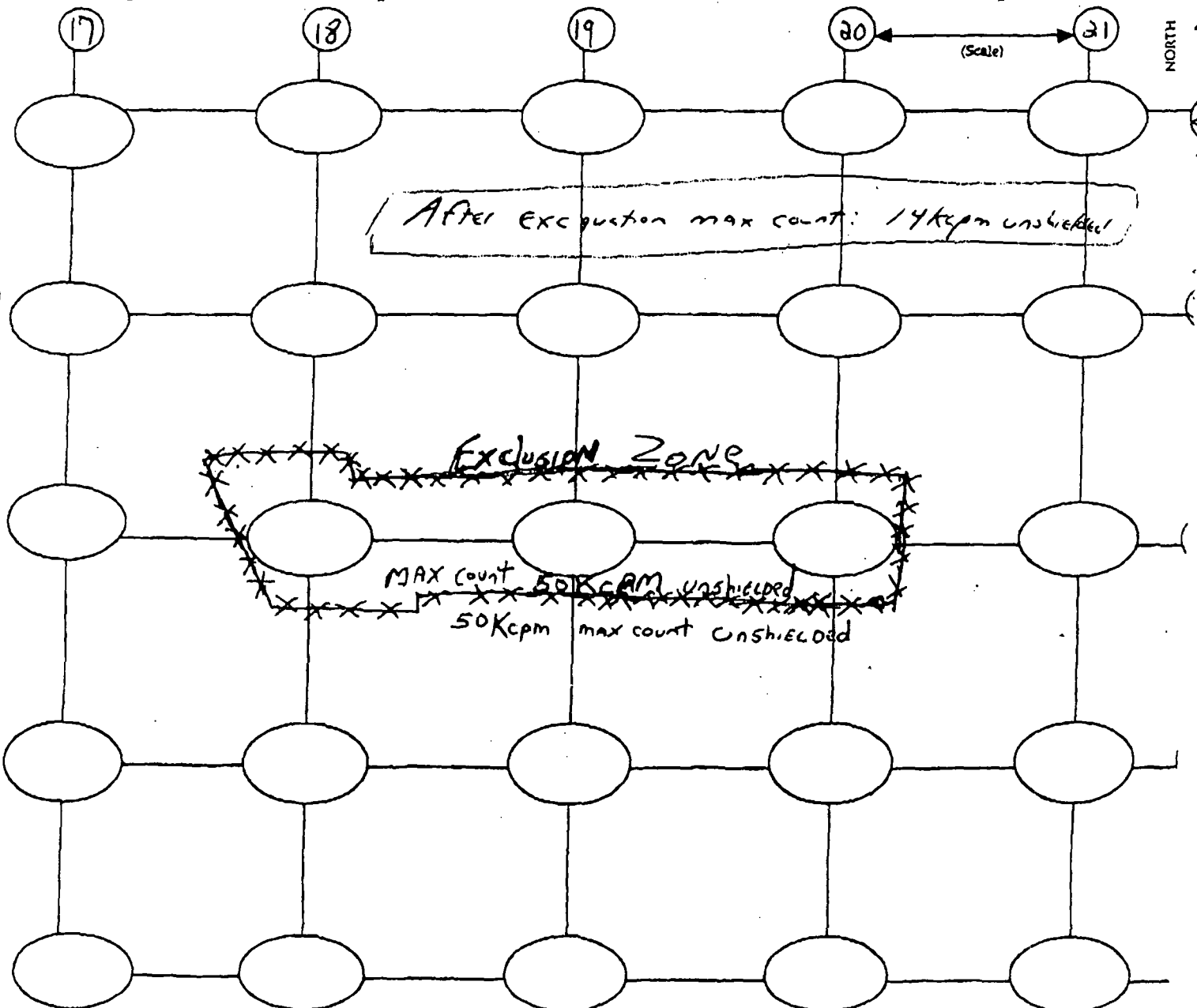
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation Pre EPA

Background 5-10 Kcpm cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ - Exclusion Zone



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 1

STS Consultants, Ltd.

Date 8-1-02

Technician Tim O'Brien for Leonard Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

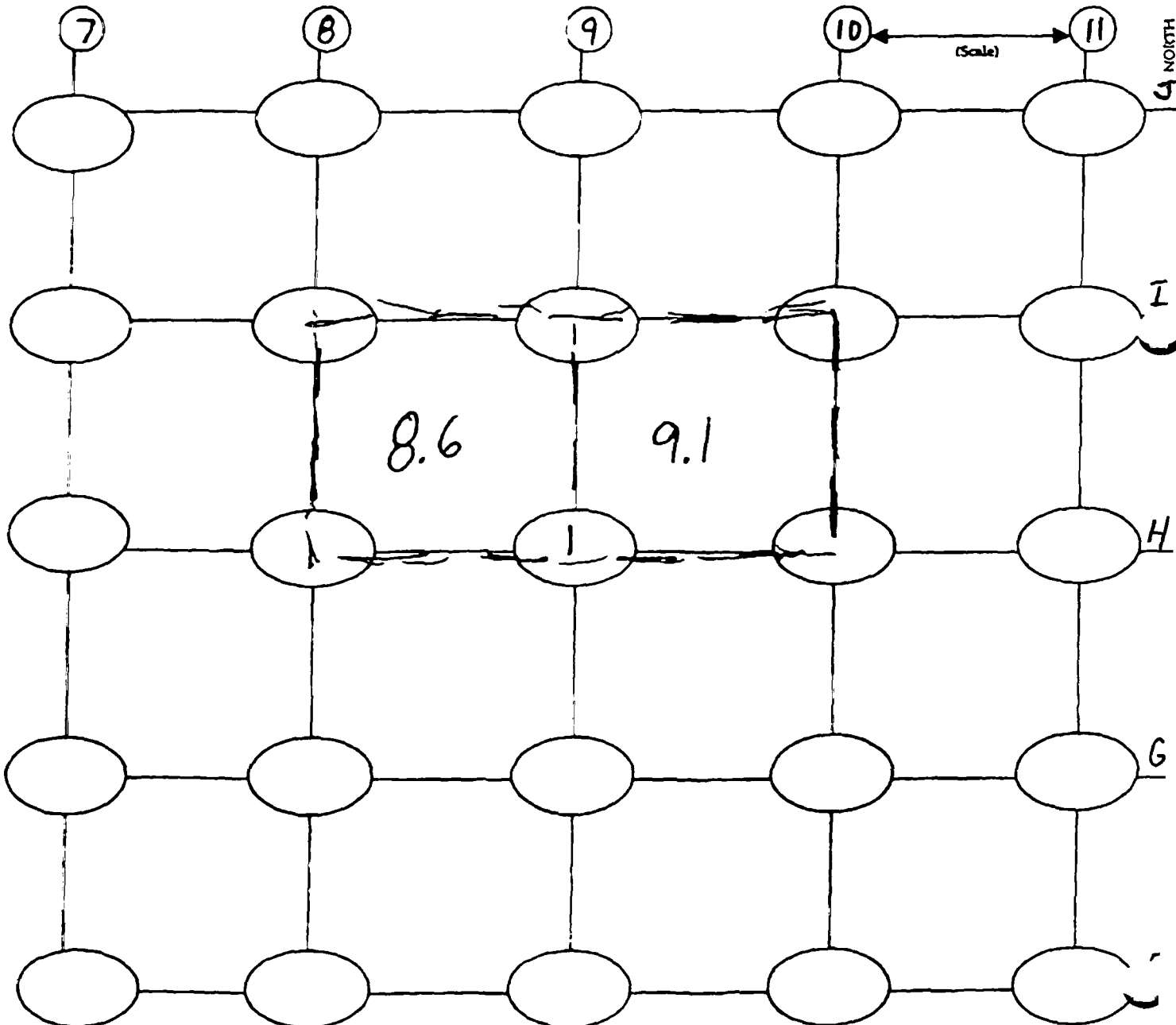
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Pt EPA

Background 3K-6K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Exclusion Zone



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician L D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

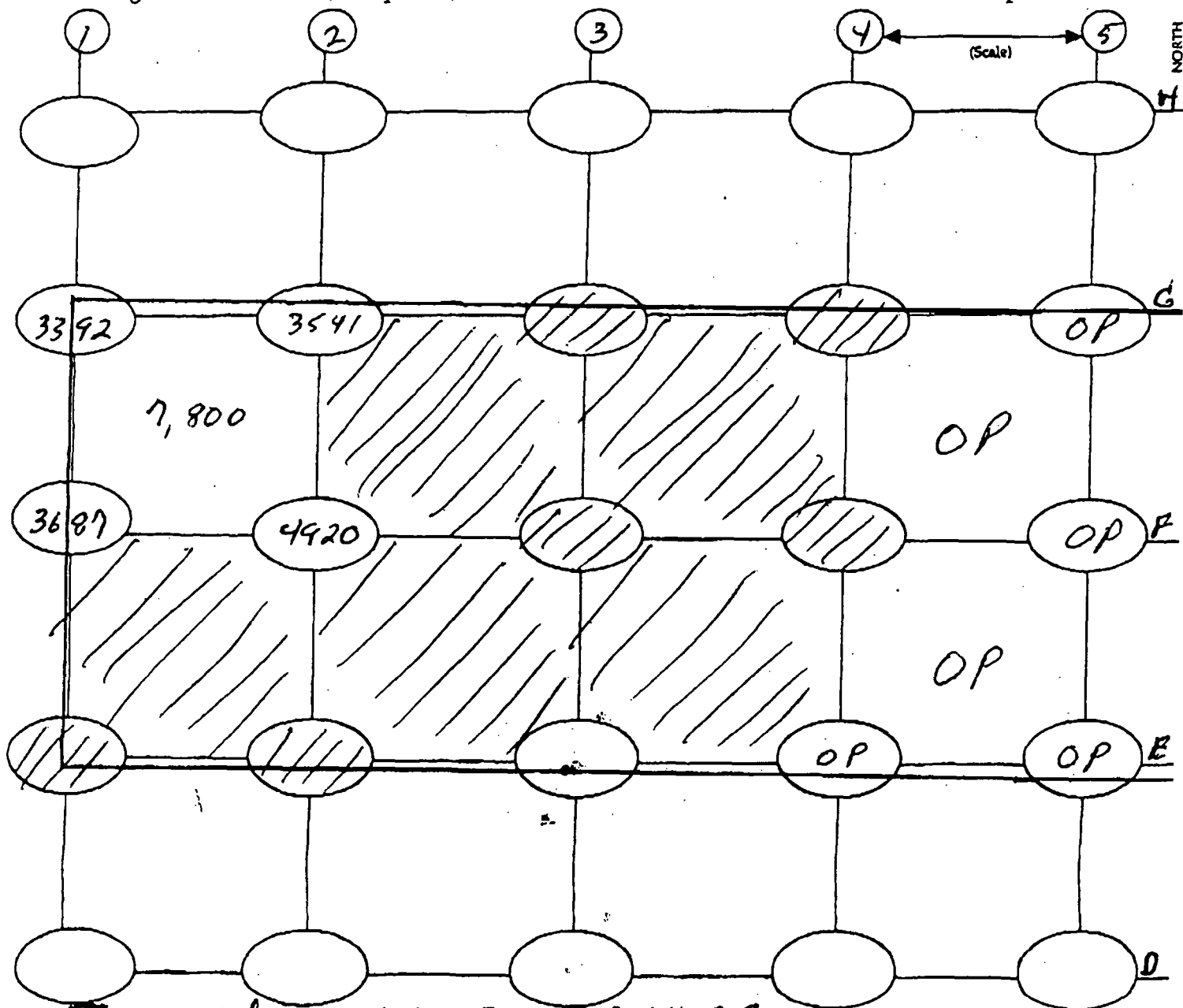
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation Surface

Background 6K-126 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP = Other Page
Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

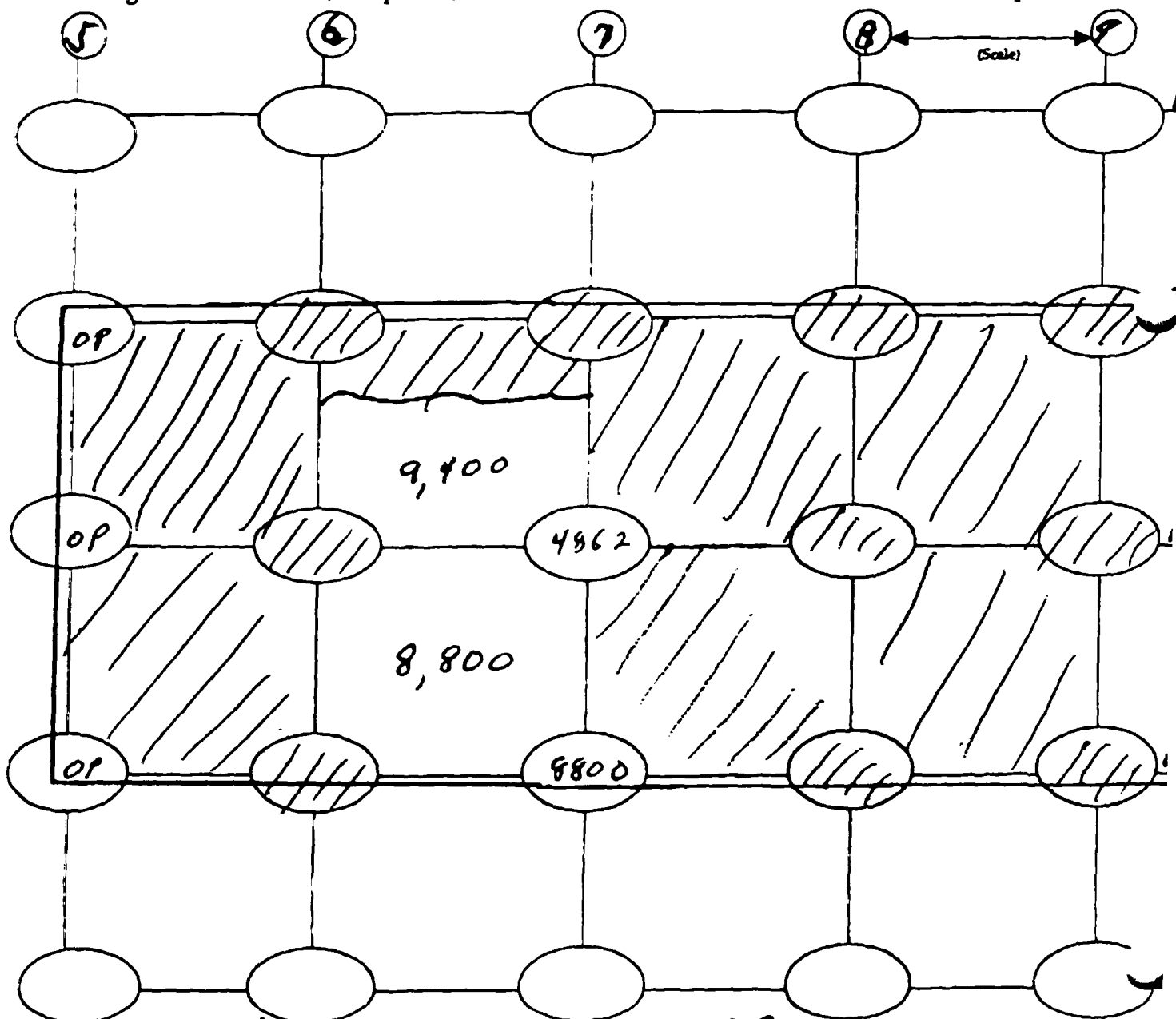
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation Surface

Background 64-124 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.



▨ Excavated as Exclusion Zone OP = Other Page
* = Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician LD Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

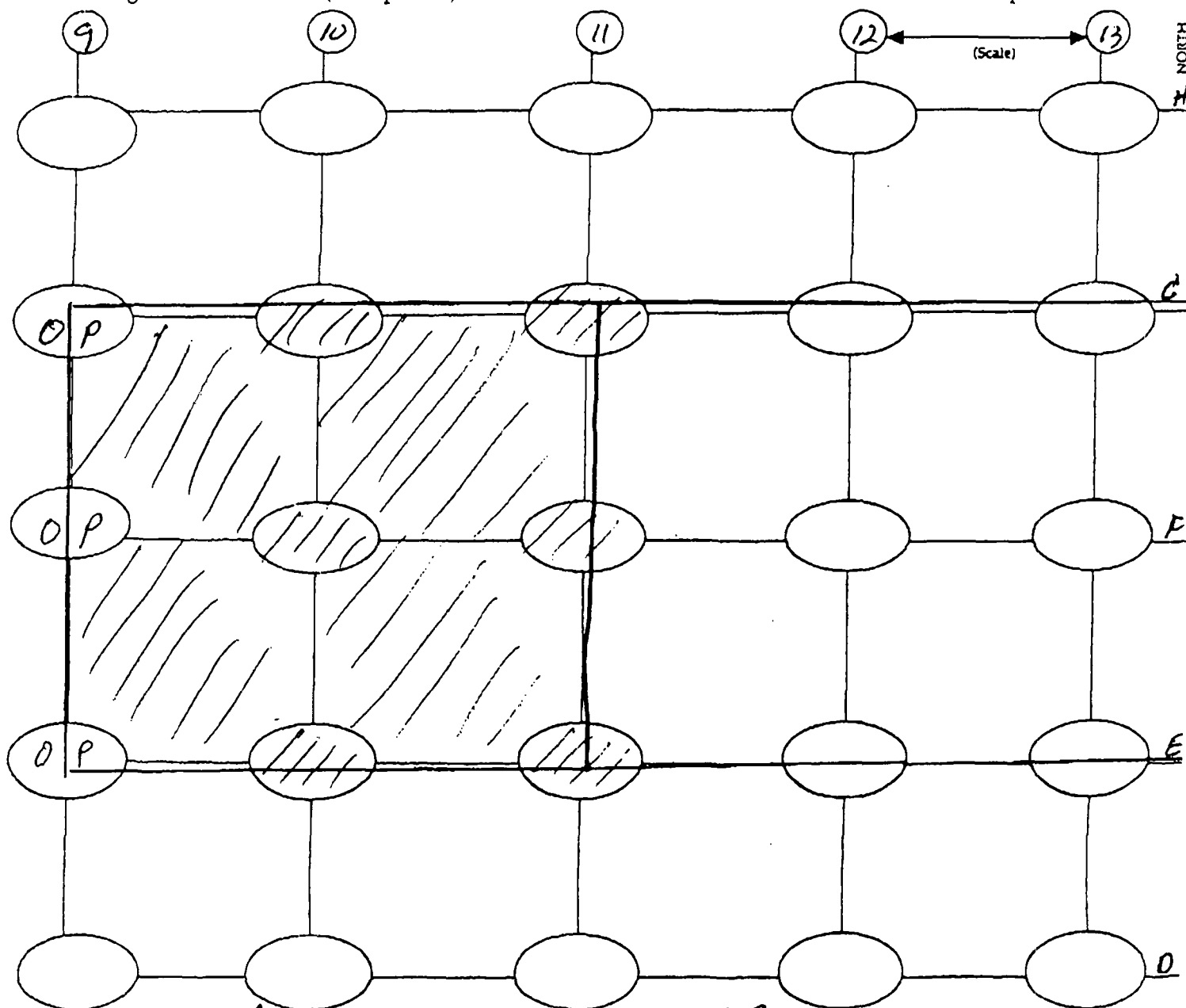
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 64-124 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician L D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

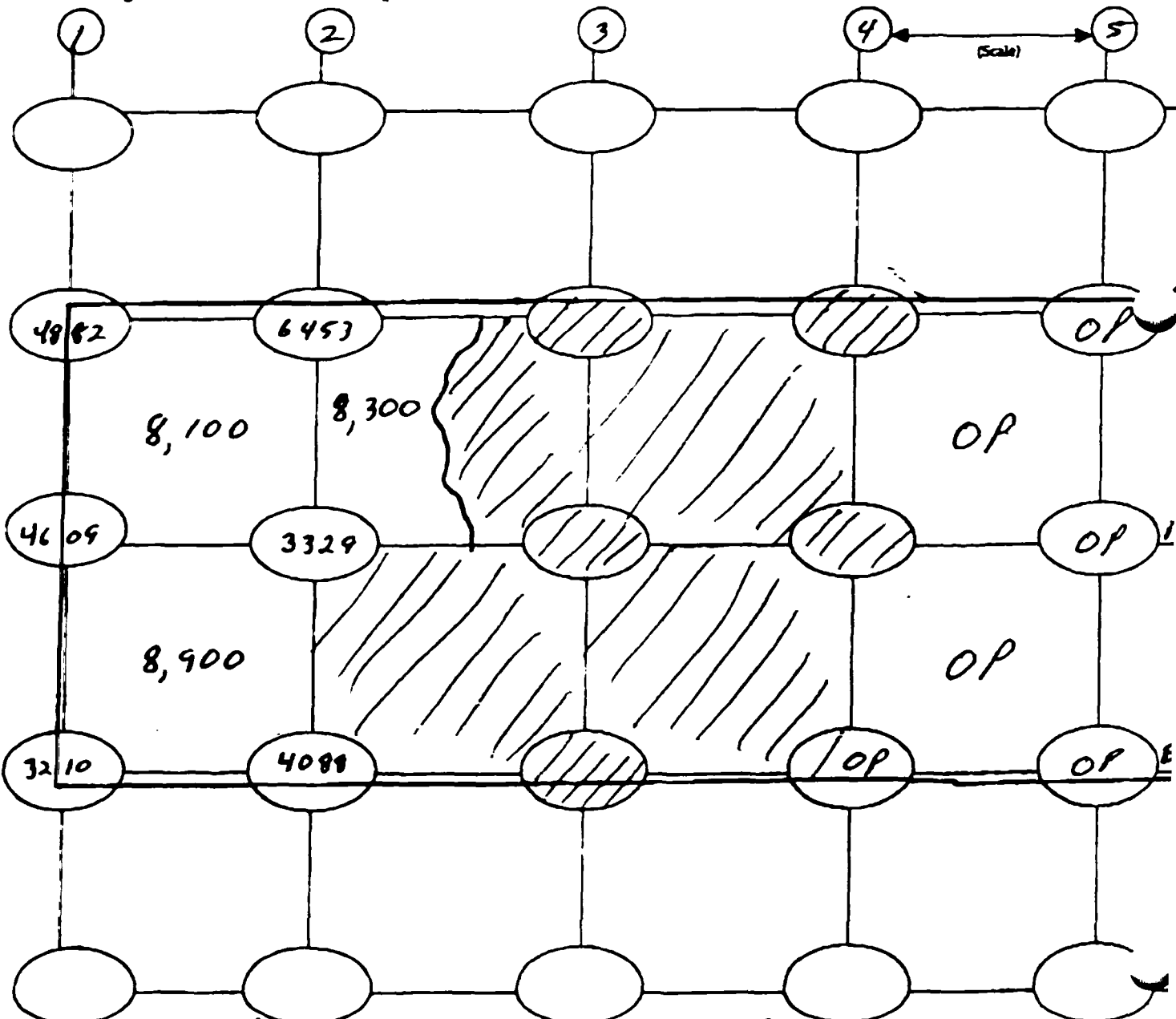
Serial No. 126496 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 6.4 - 12.4 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.



▨ Excavated as Exclusion Zone OP = Other Phase
* = Exclusion zone boundary



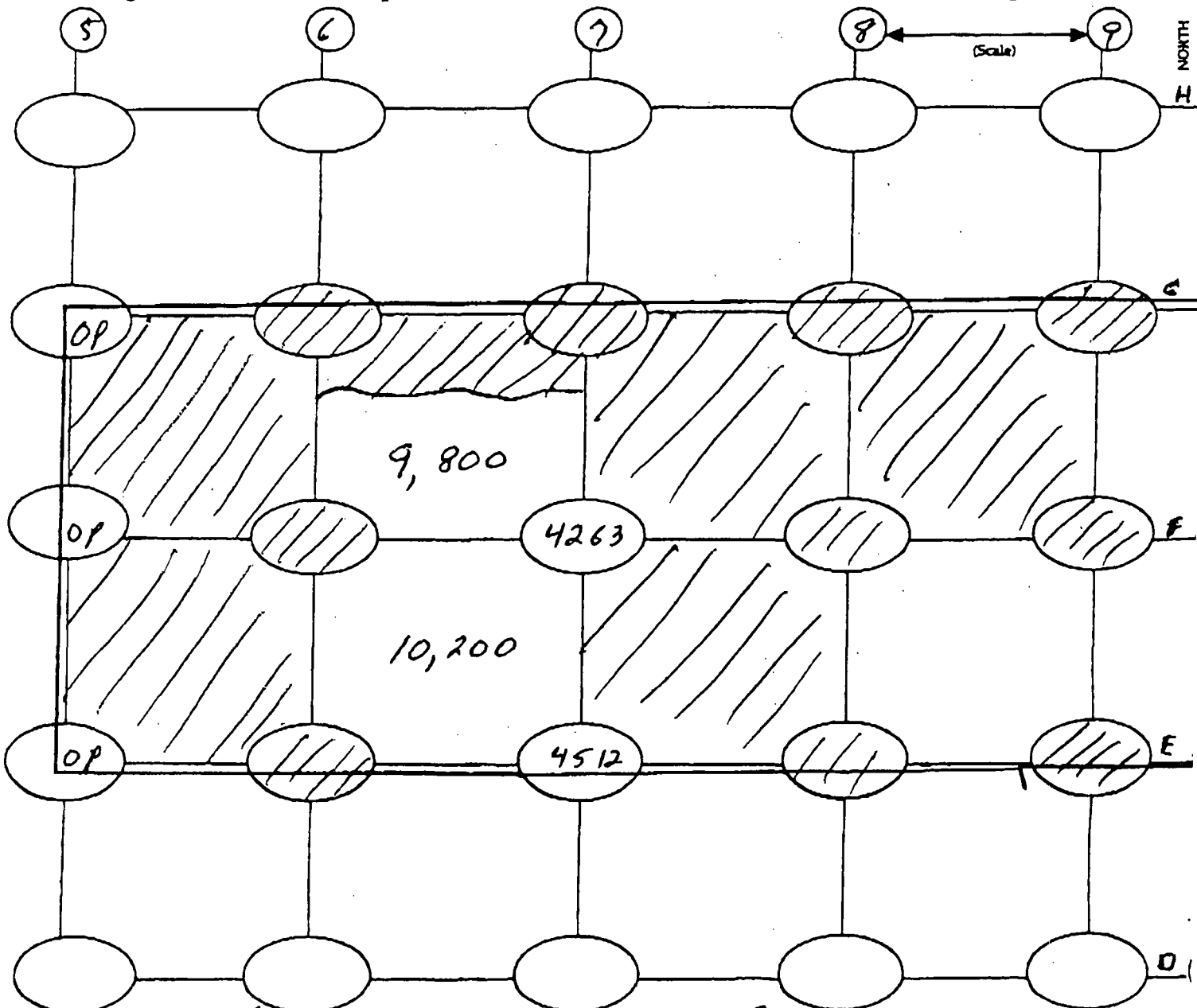
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 18

STS Consultants, Ltd.

Date 7-30-02Technician JD SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 64-124 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



/// Excavated as Exclusion Zone OP=Other Page
* = Exclusion zone boundary



RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 7-30-02

Technician I D Smith

Inst Model Ludlum 2221

meter # 126496 Probe # 168143

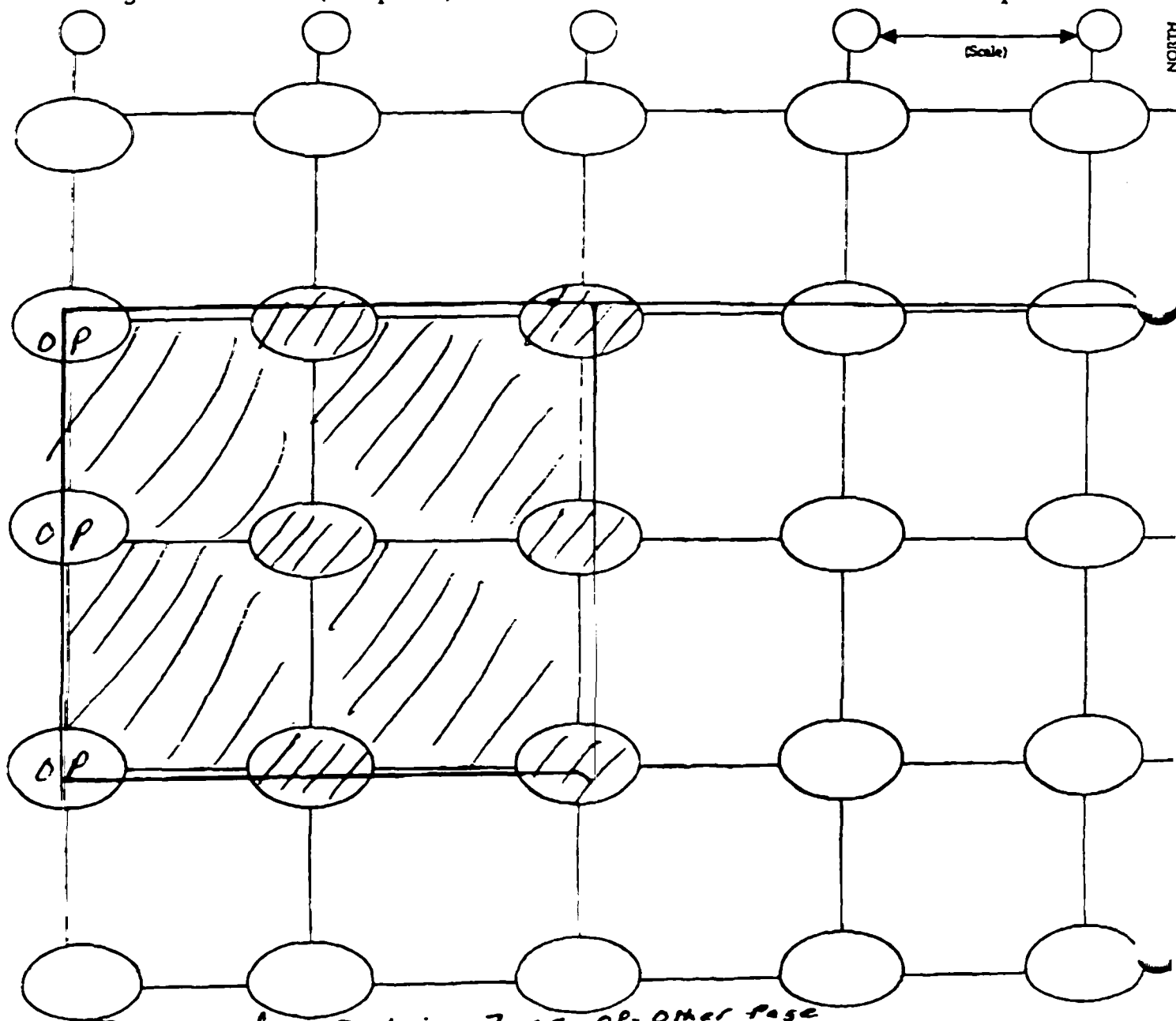
Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded / Not Shielded

Lift Elevation -1.5

Background 6A-12h cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other phase
 = Exclusion zone boundary

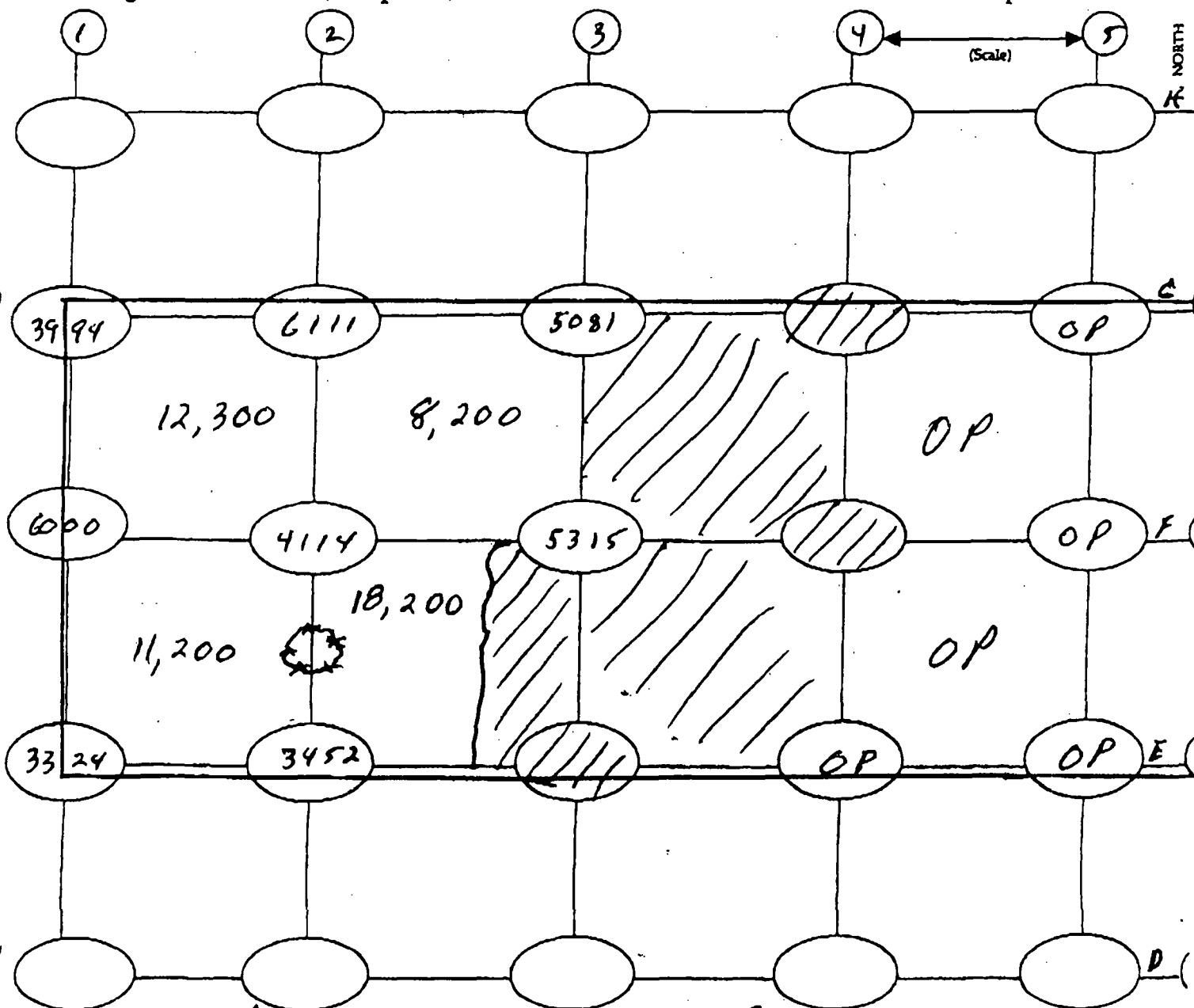


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 7 of 18Date 7-30-02Technician I D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 64-126 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
* = Exclusion zone boundary



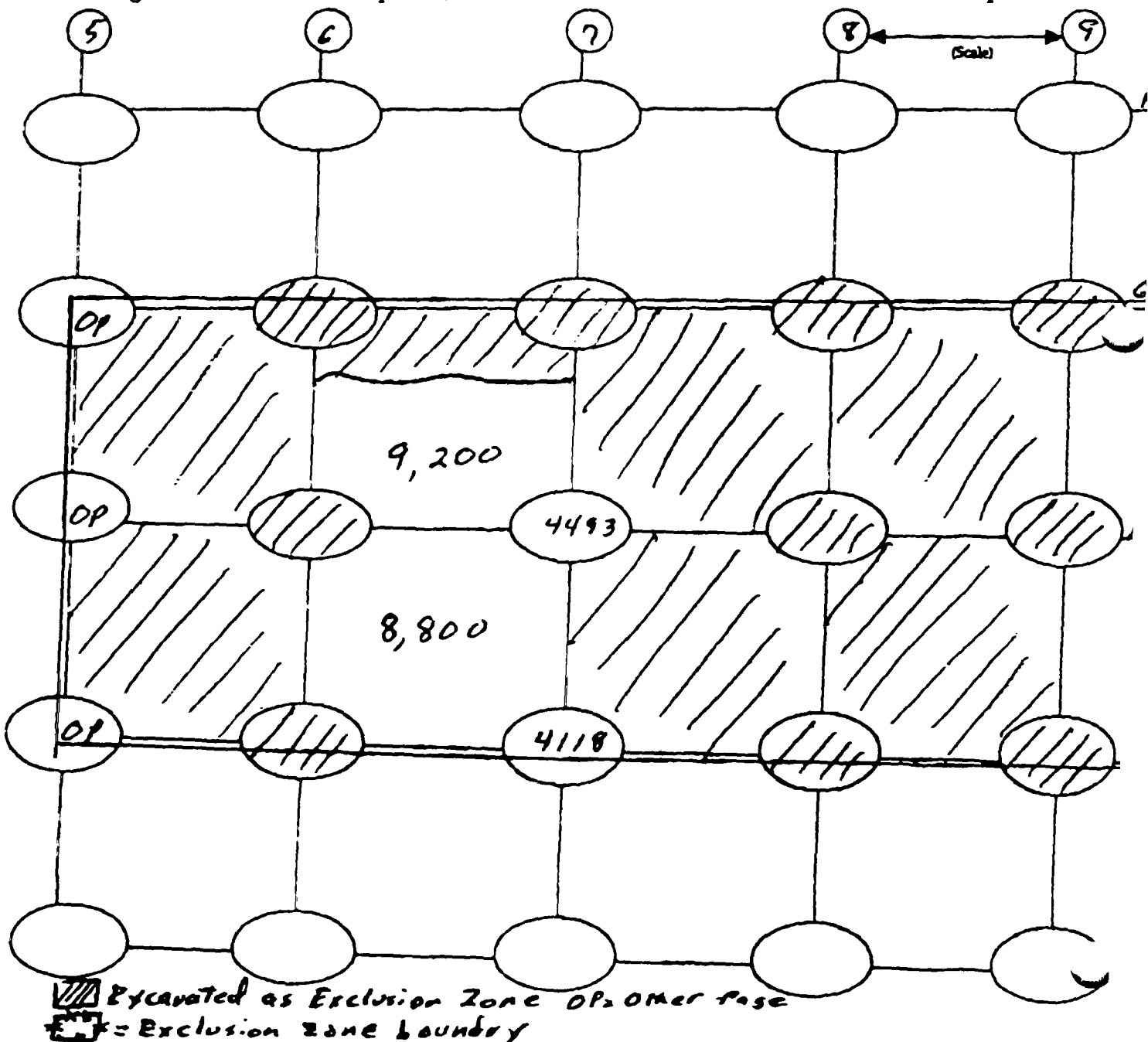
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 8 of 18

STS Consultants, Ltd.

Date 9-30-02Technician L D Smith
meter # Probe #Inst. Model Ludlum 2221Serial No. 125496 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background GA-12K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 7-30-02

Technician JD

Inst. Model Ludlum 2221

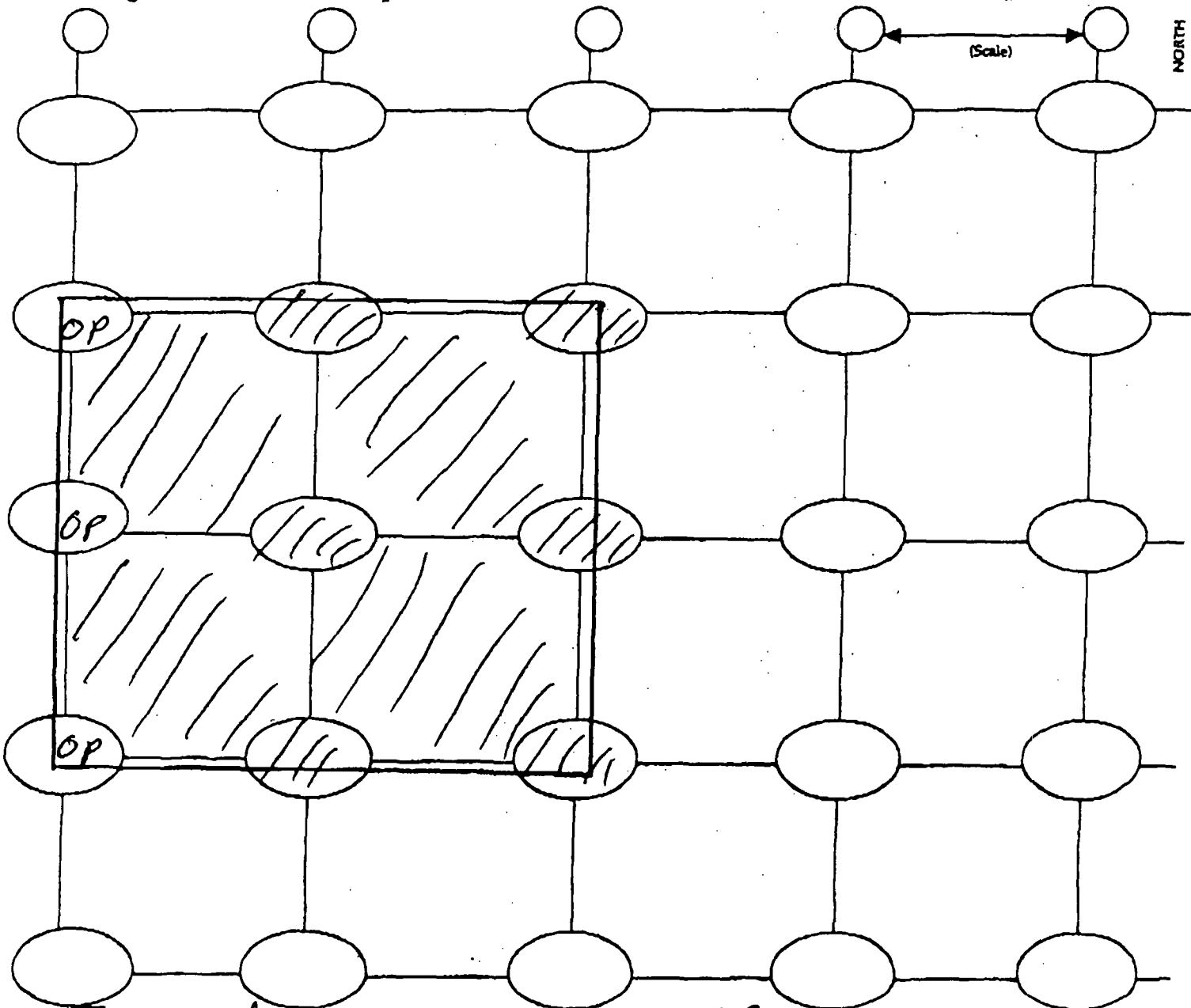
meter # 126496 Probe # 168143

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 6.5 - 12.5 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary



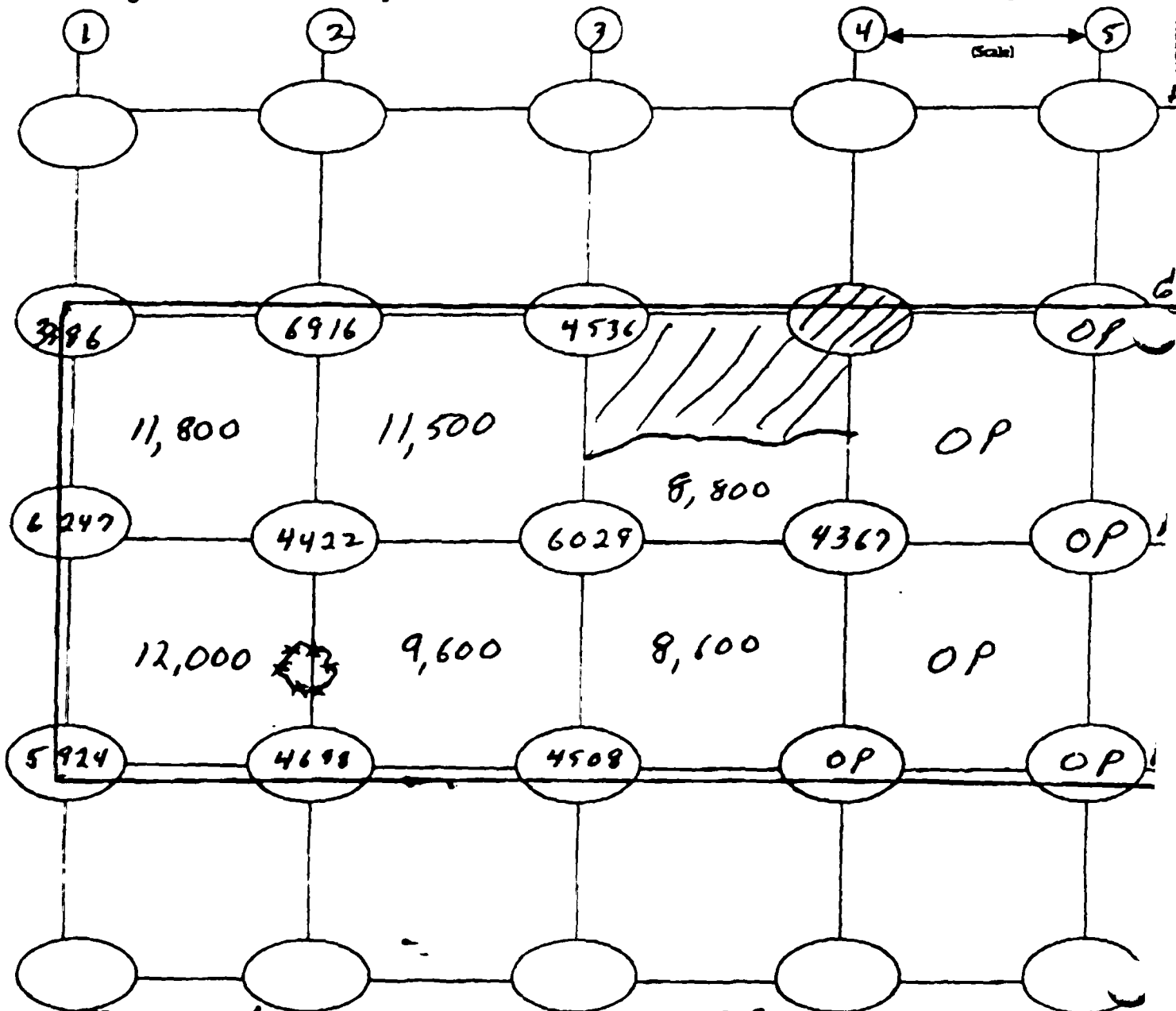
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 10 of 18

STS Consultants, Ltd.

Date 7-30-02Technician LD Smith
meter # 126486 Probe # 168143Inst. Model Ludlum 2221Serial No. 126486 / 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded ☒ Not ShieldedLift Elevation -4.5'Background 6k-12k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

Excavated as Exclusion Zone OP = Other Page
--- = Exclusion zone boundary



RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 7-30-02

Technician L D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

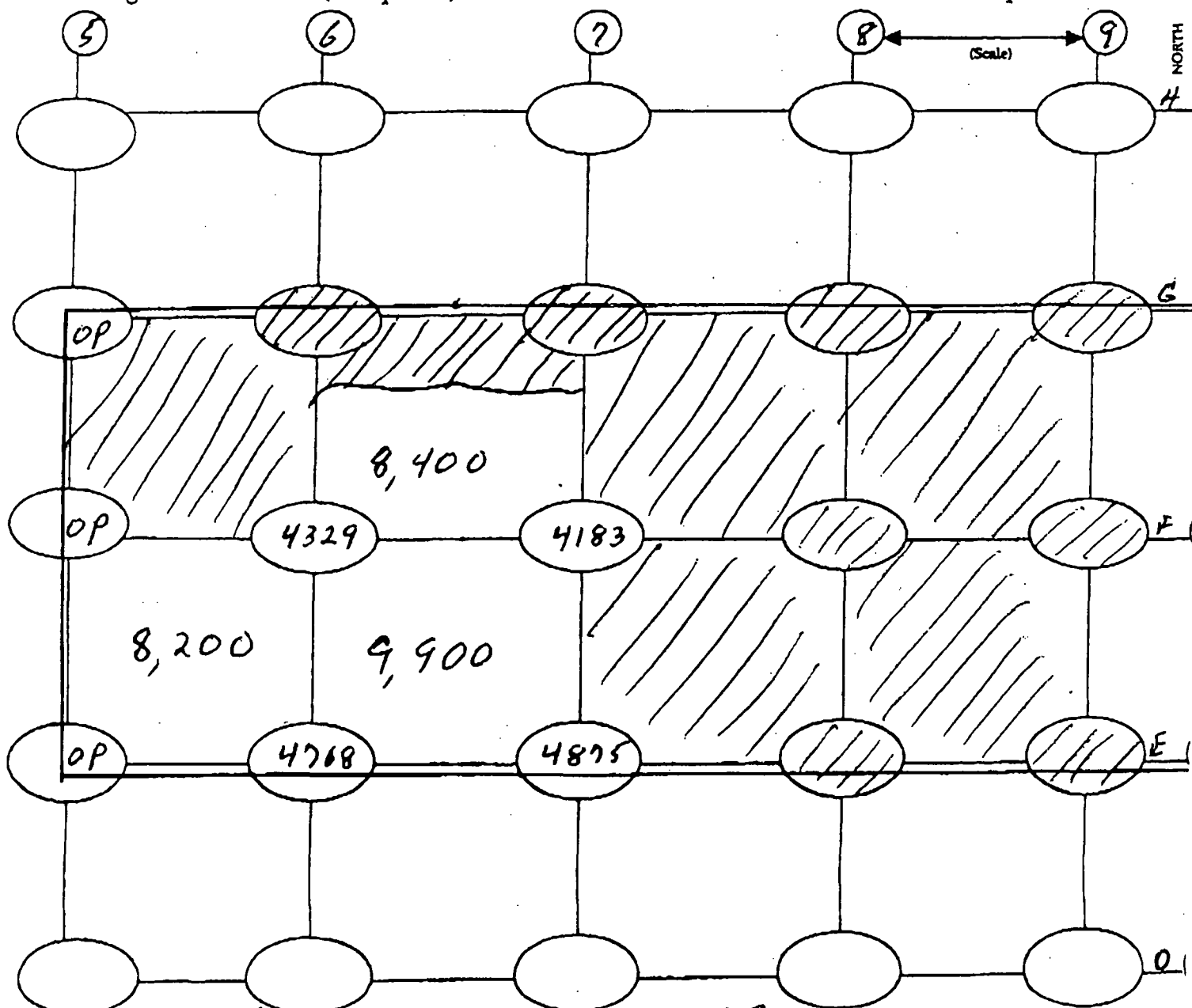
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 64-124 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
** = Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 12 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician I D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496/168143

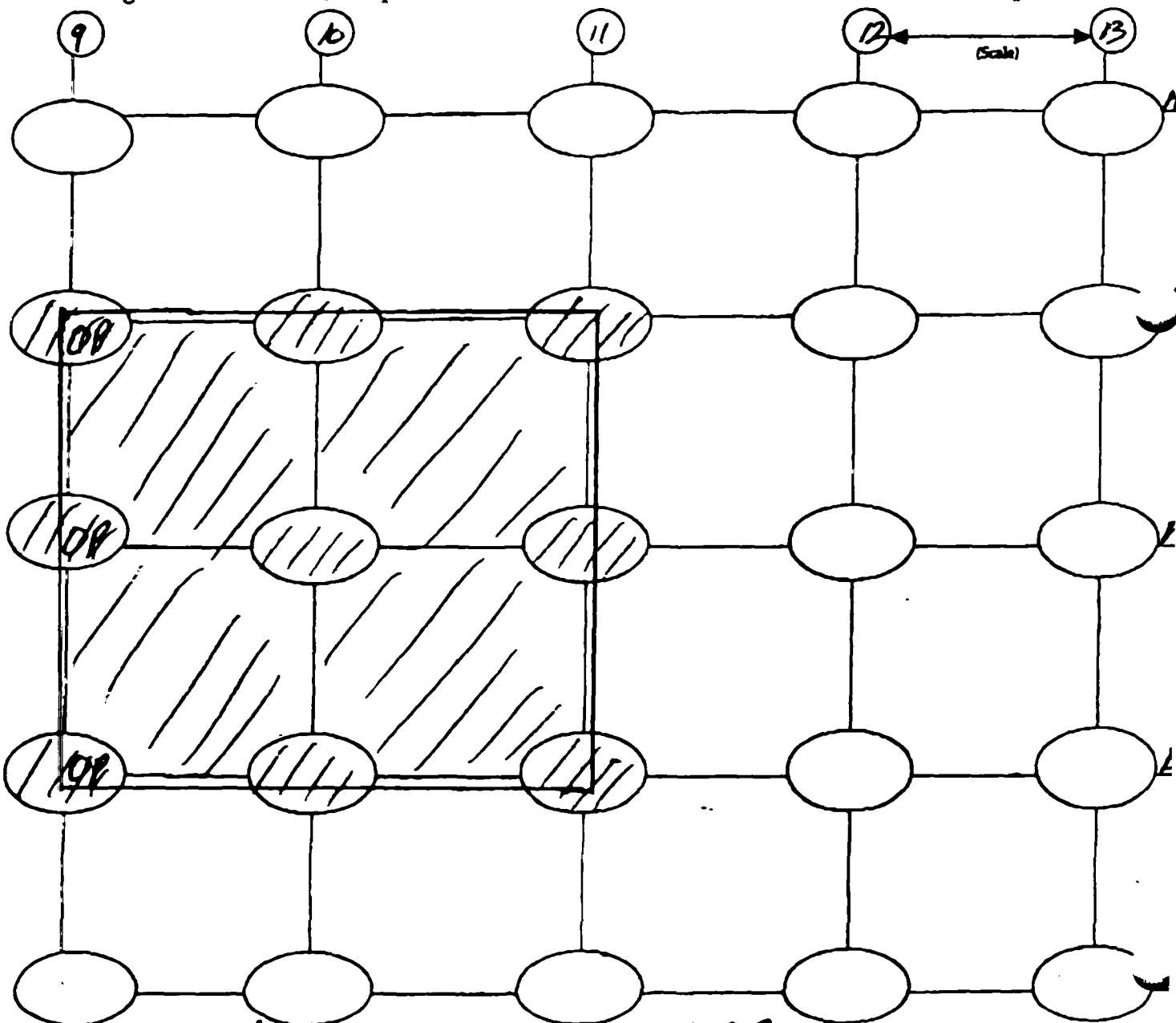
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 6k-12k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, OMER Page
 = Exclusion zone boundary

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 13 of 18

STS Consultants, Ltd.

Date 7-30-02

Technician LO Smith

Inst. Model Ludlum 2221

meter #	Probe #
Serial No. 126496	168143

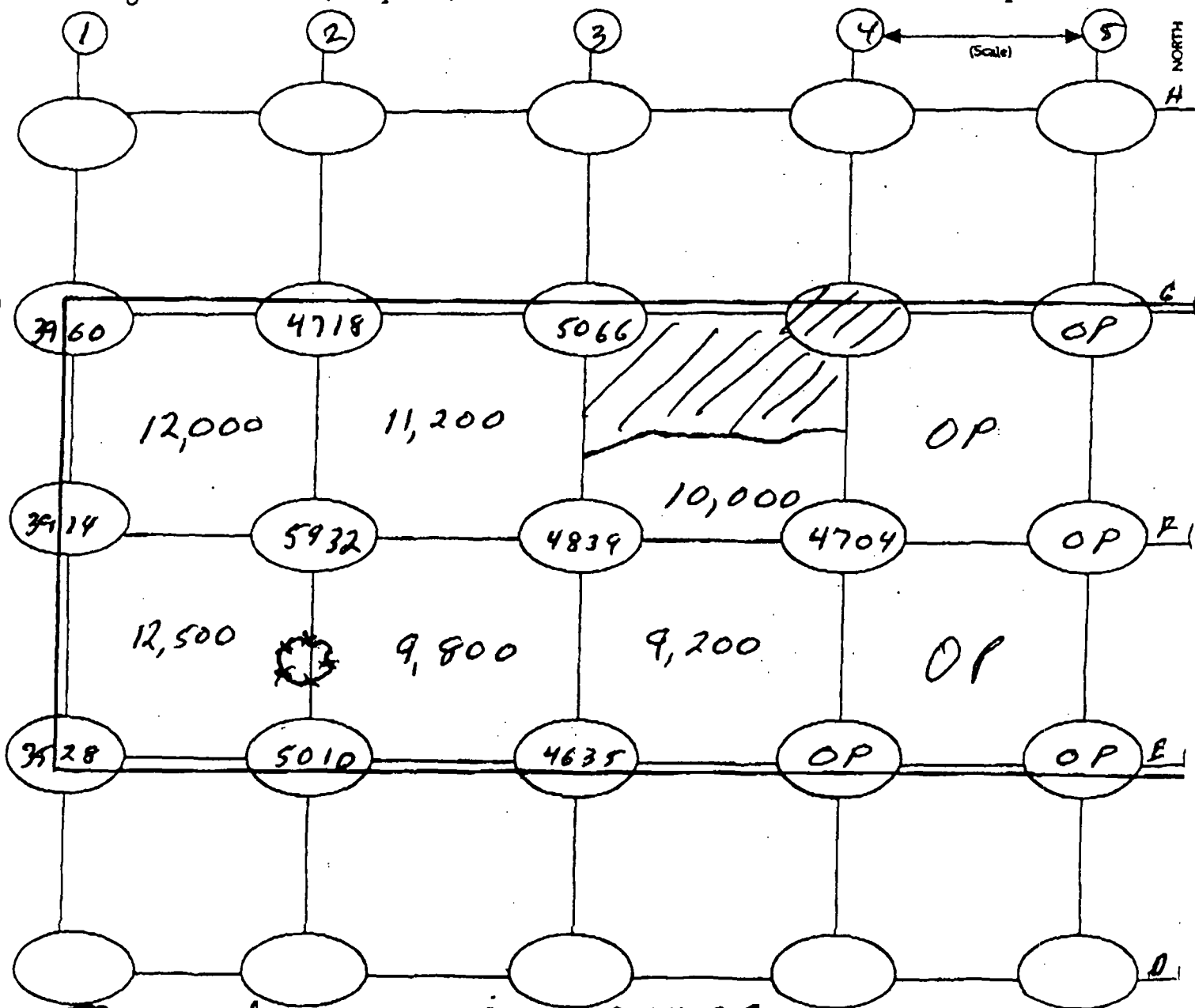
Probe Type: 1'x1" Nal / 2"x2" Nal
Shielded / Not Shielded



Lift Elevation -6'

Background 6A-12A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP = Other Phase
 = Exclusion zone boundary



RADIATION SURVEY FORM

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STS Consultants, Ltd

Date 7-30-02

Technician L D Smith
meter # 12C496 Probe # 168143

Inst. Model Ludlum 2221

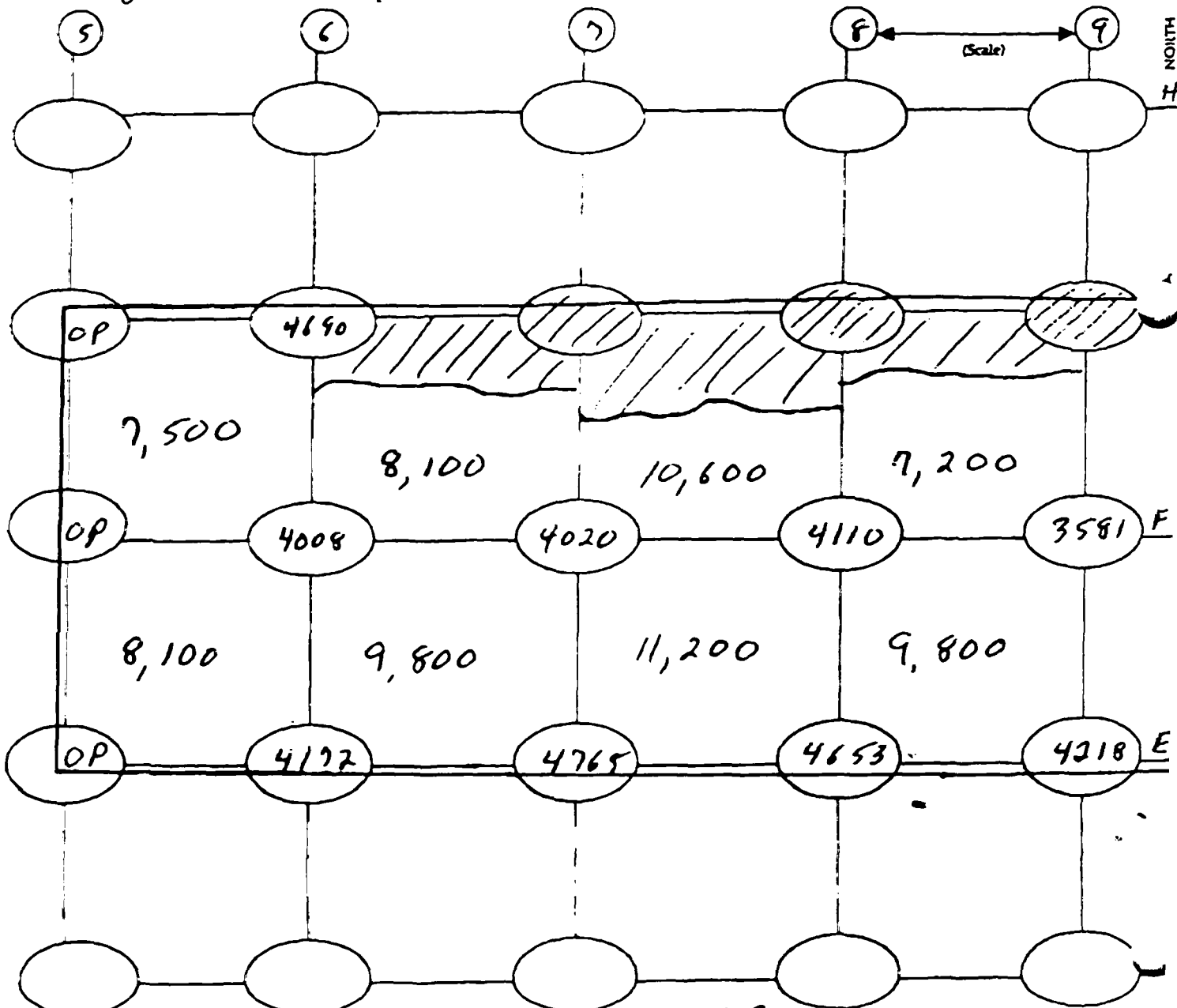
Serial No. 12C496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 6.7 - 12.4 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Shaded area = Excavated as Exclusion Zone OP = Outer Edge
F = Exclusion zone boundary



RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 7-30-02

Technician LD Smith

Inst. Model Ludlum 2221

meter # 126486 Probe # 168143

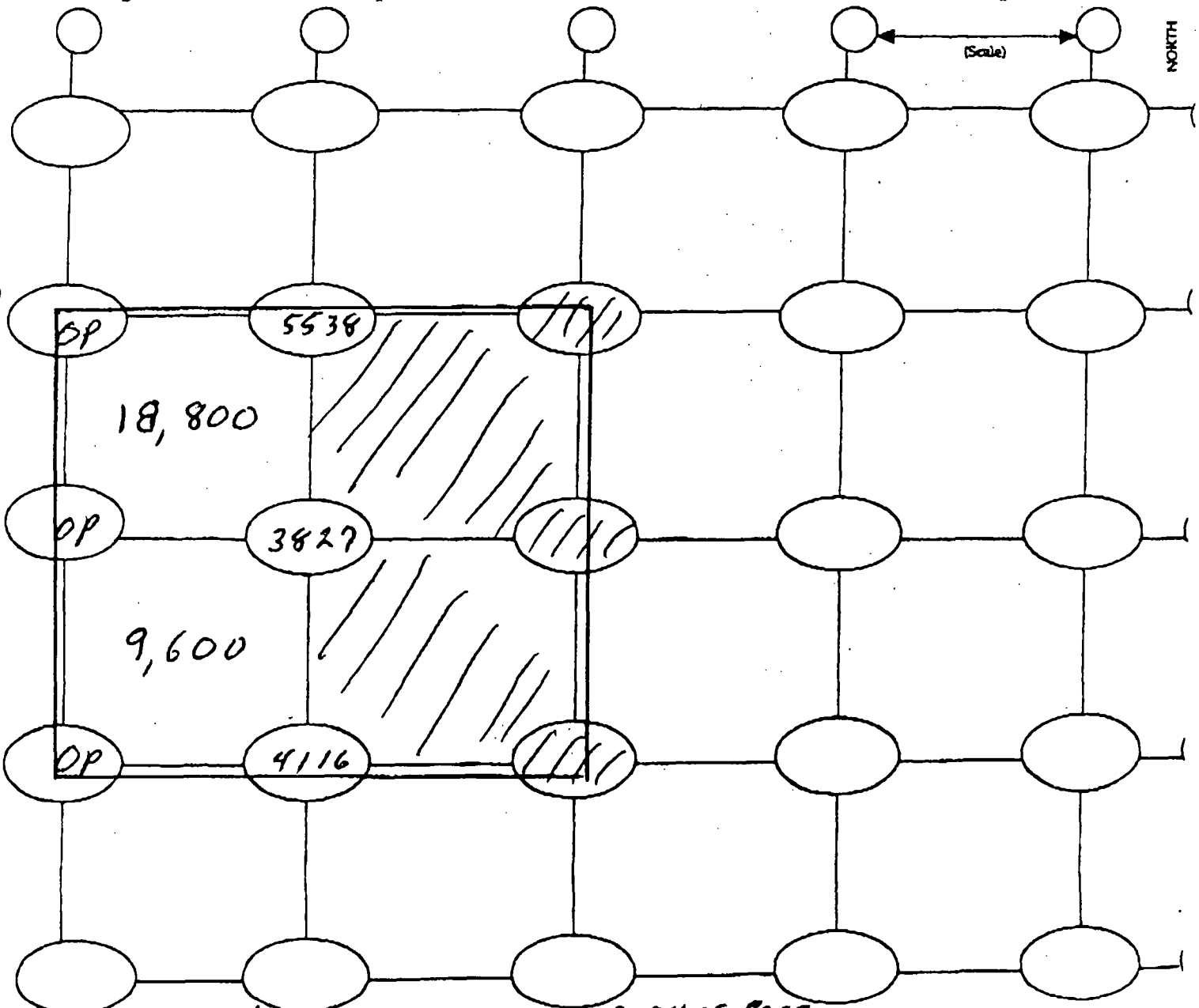
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 64-124 cpm

Action Level 20,860 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone DP = Other Phase
Exclusion zone boundary



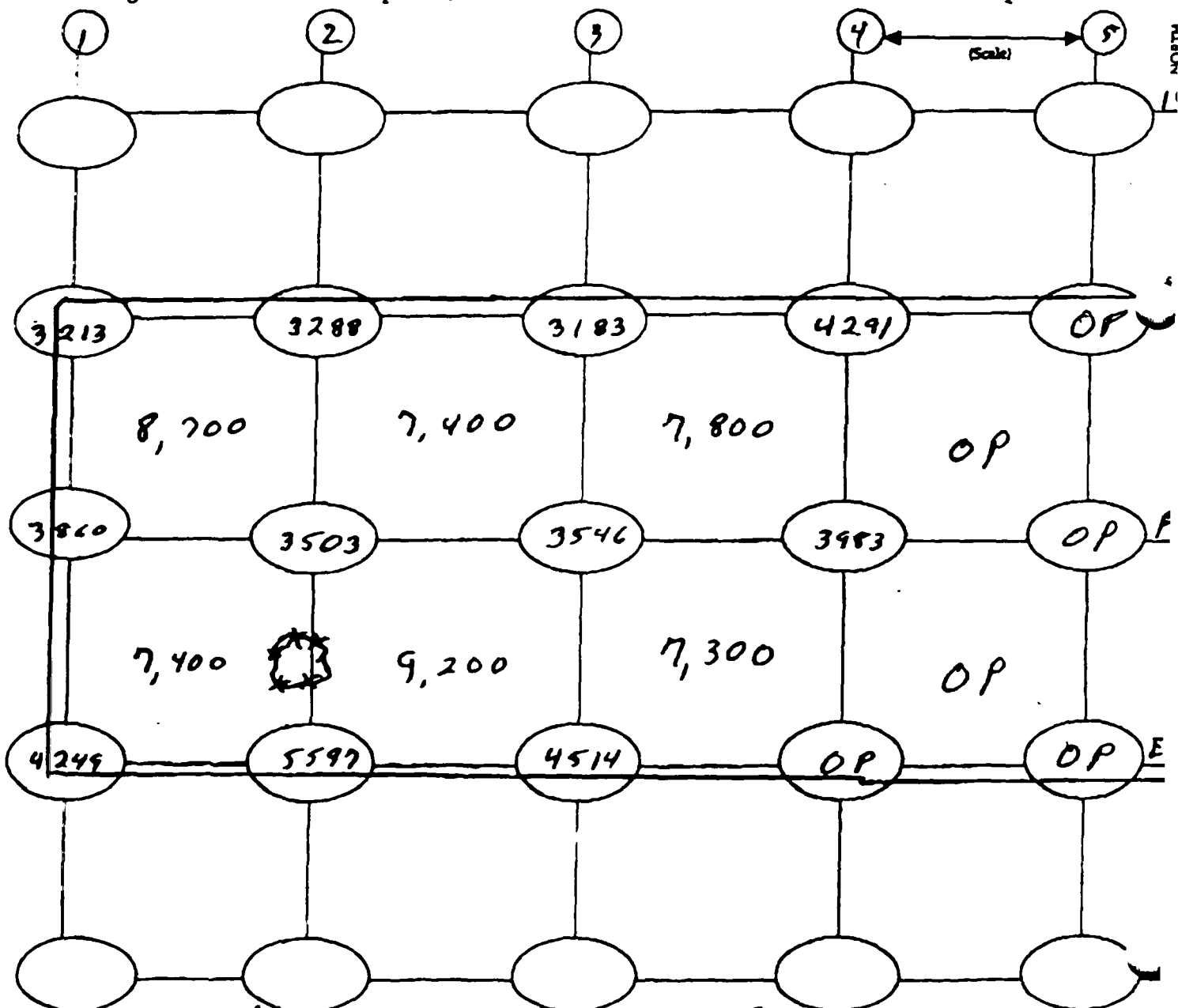
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 7-30-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5Background 64-124 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other use
* = Exclusion zone boundary

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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STS Consultants, Ltd.

Date _____

7-30-02

Technician

L D Smith

Inst. Model Ludlum 2221

meter #
Serial No. 126496

Prodc 28

Serial No. 126496 / 168143

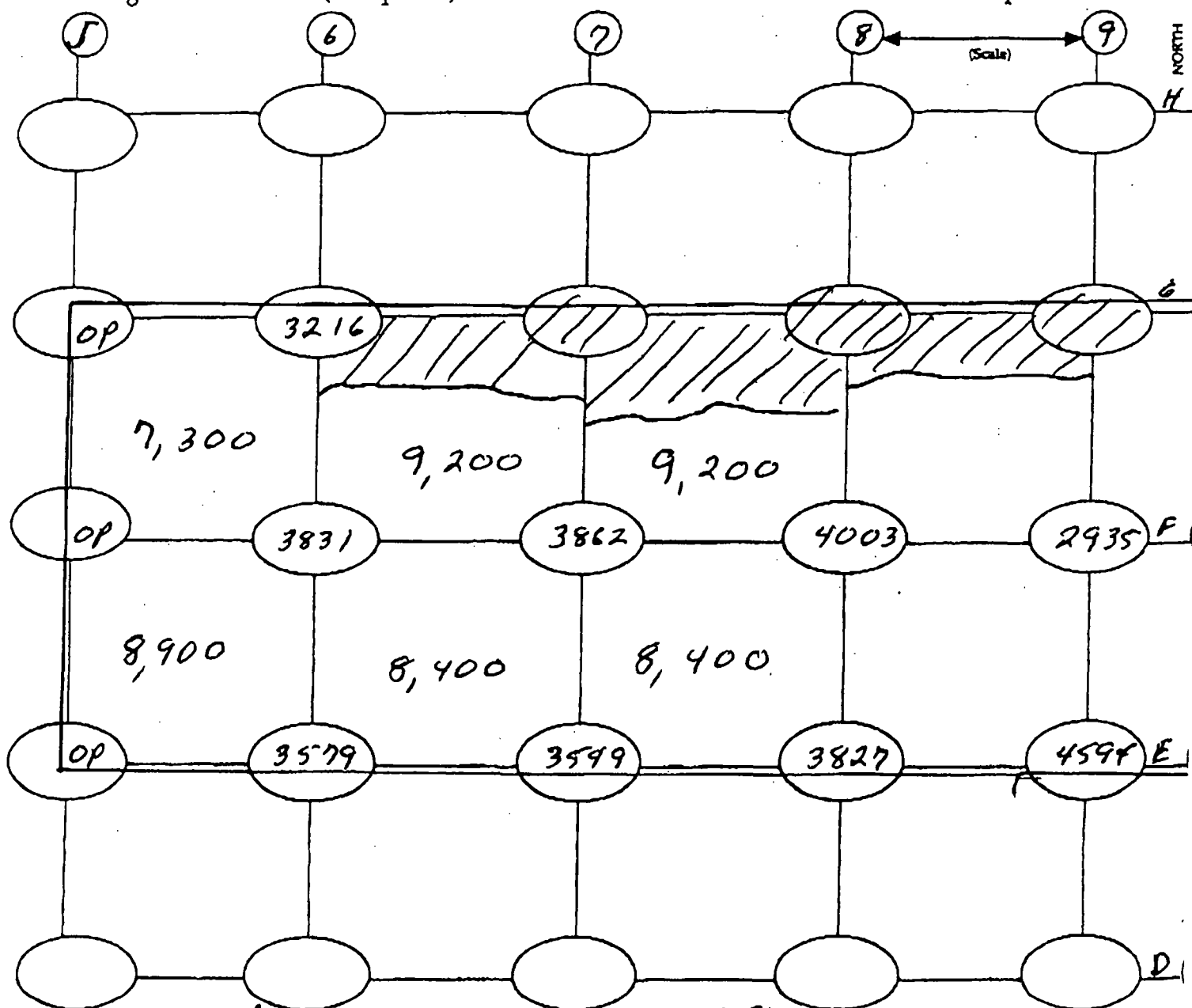
Probe Type: 1'x1" Nal / 2'x2" Nal
Shielded / Not Shielded



Lift Elevation -2.5'

Background 6A-12A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP= Omer page
 = Exclusion zone boundary



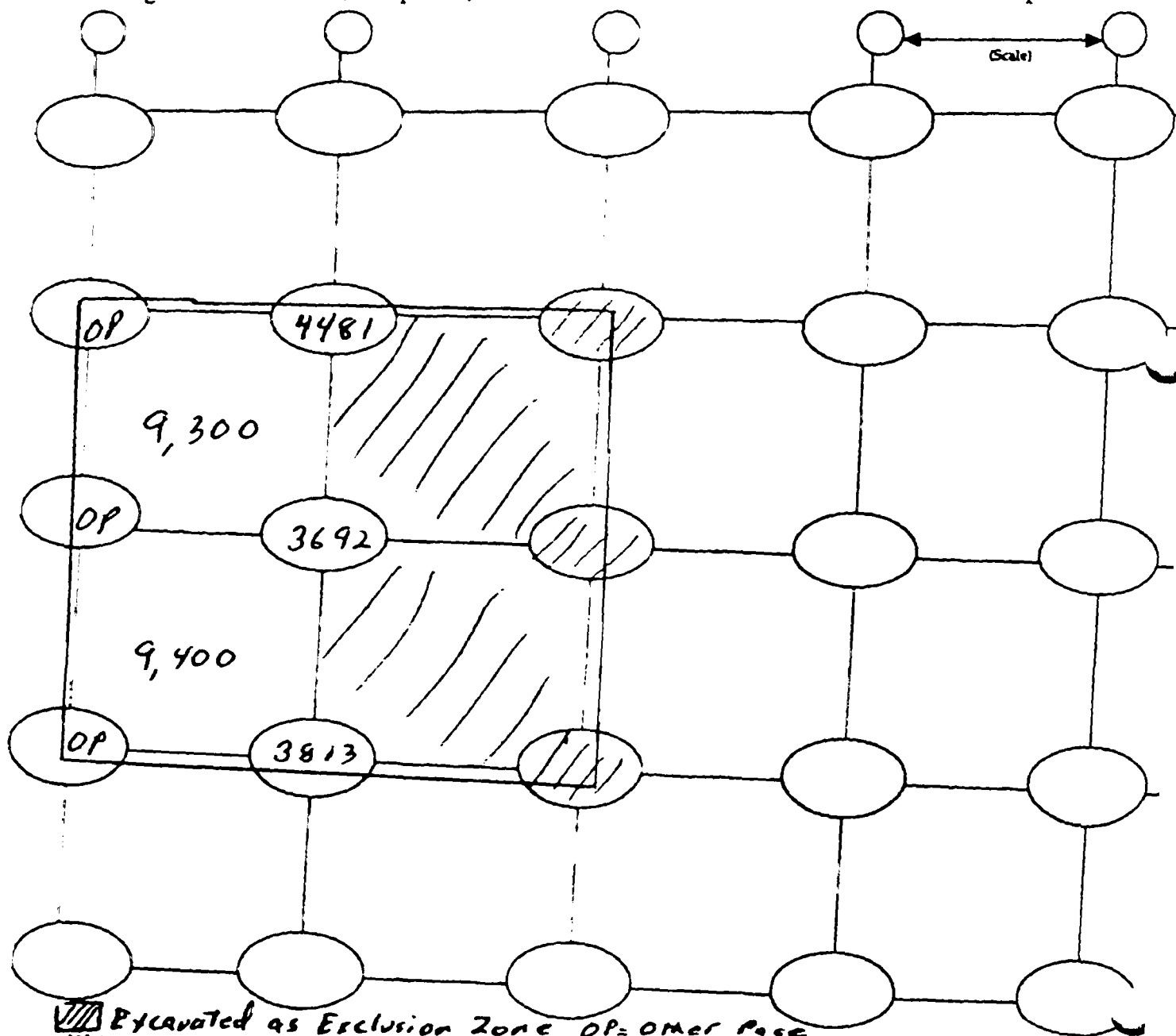
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 18 of 18

STS Consultants Ltd

Date 7-30-02Technician L D Smith
meter # 12C496 Probe # 168143Inst. Model Ludlum 2221Serial No. 12C496 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 6K-12K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.

▨ Excavated as Exclusion Zone OP = Outer Perimeter
* = Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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STS Consultants, Ltd.

Date 7-31-02

Technician L O Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

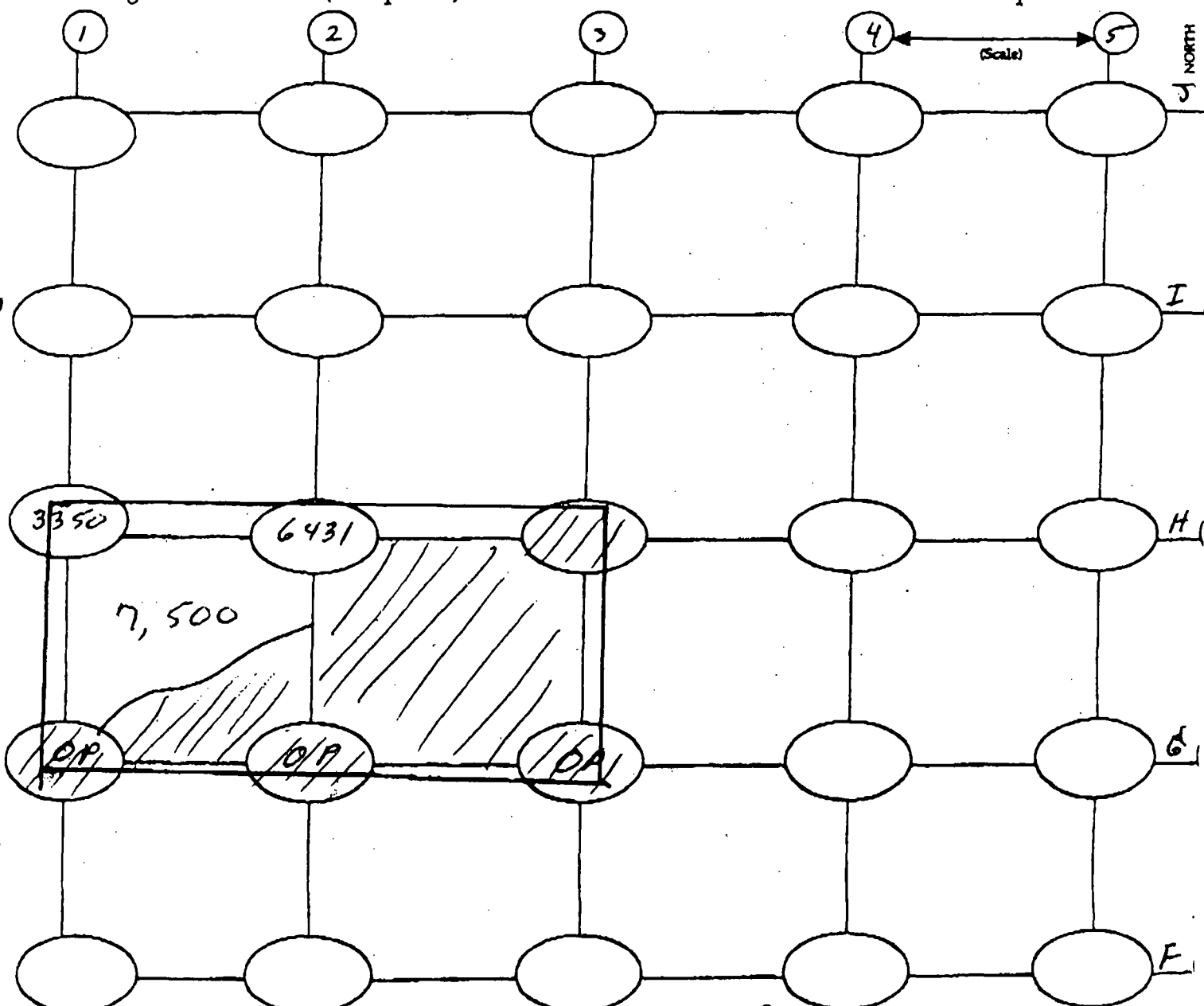
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation Surface

Background 3 h - 8 h cpm

Action Level 20,860 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, OMER, PSE
* = Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 6

STS Consultants, Ltd.

Date 7-31-02

Technician Leonard Smith
meter # Probe #

Inst. Model Ludlum 2221

Serial No. _____

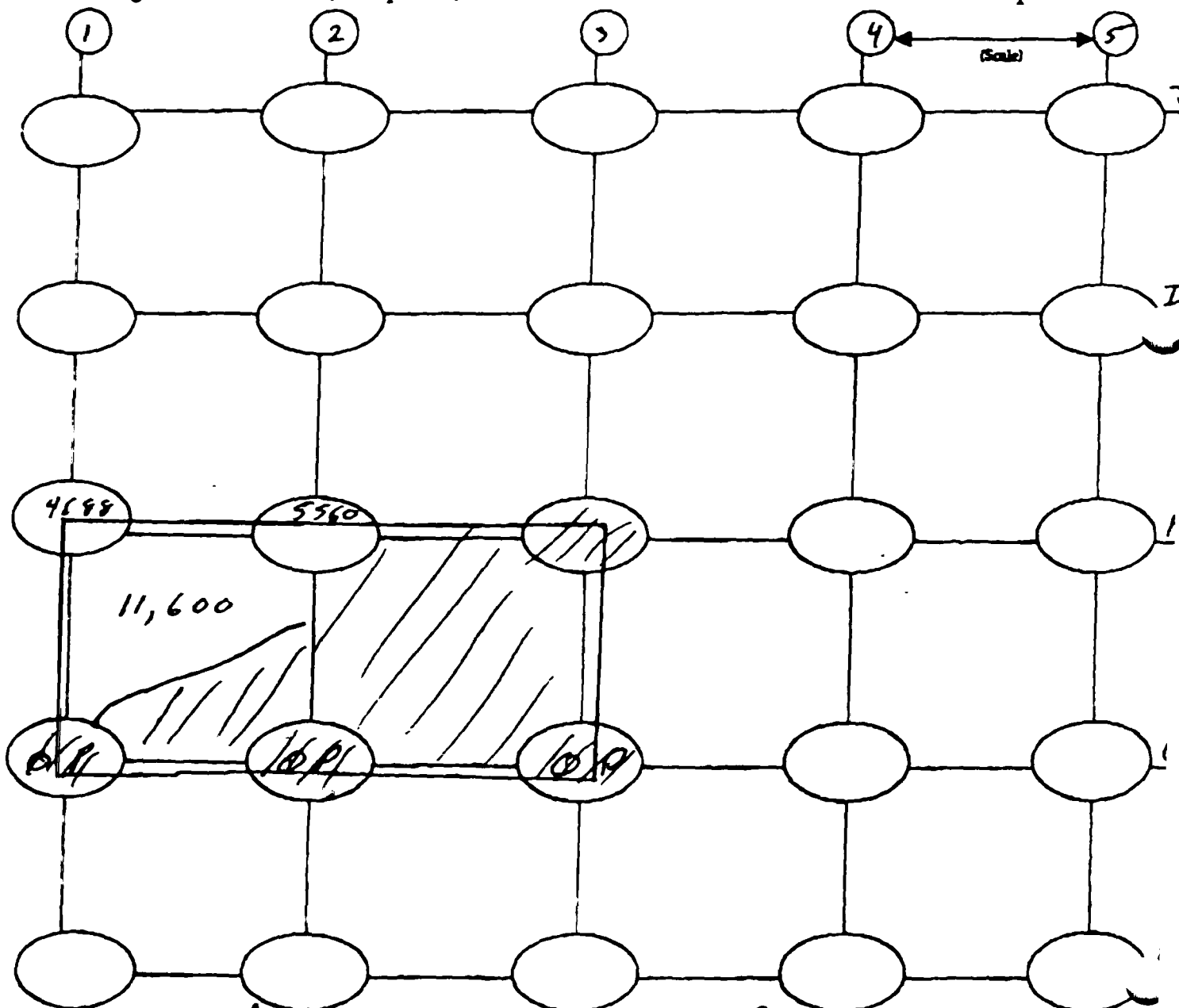
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 3k-8k cpm

Action Level 20,860 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP= Omer Pass
 = Exclusion zone boundary



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 6

Date 7-31-02

Technician I A Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

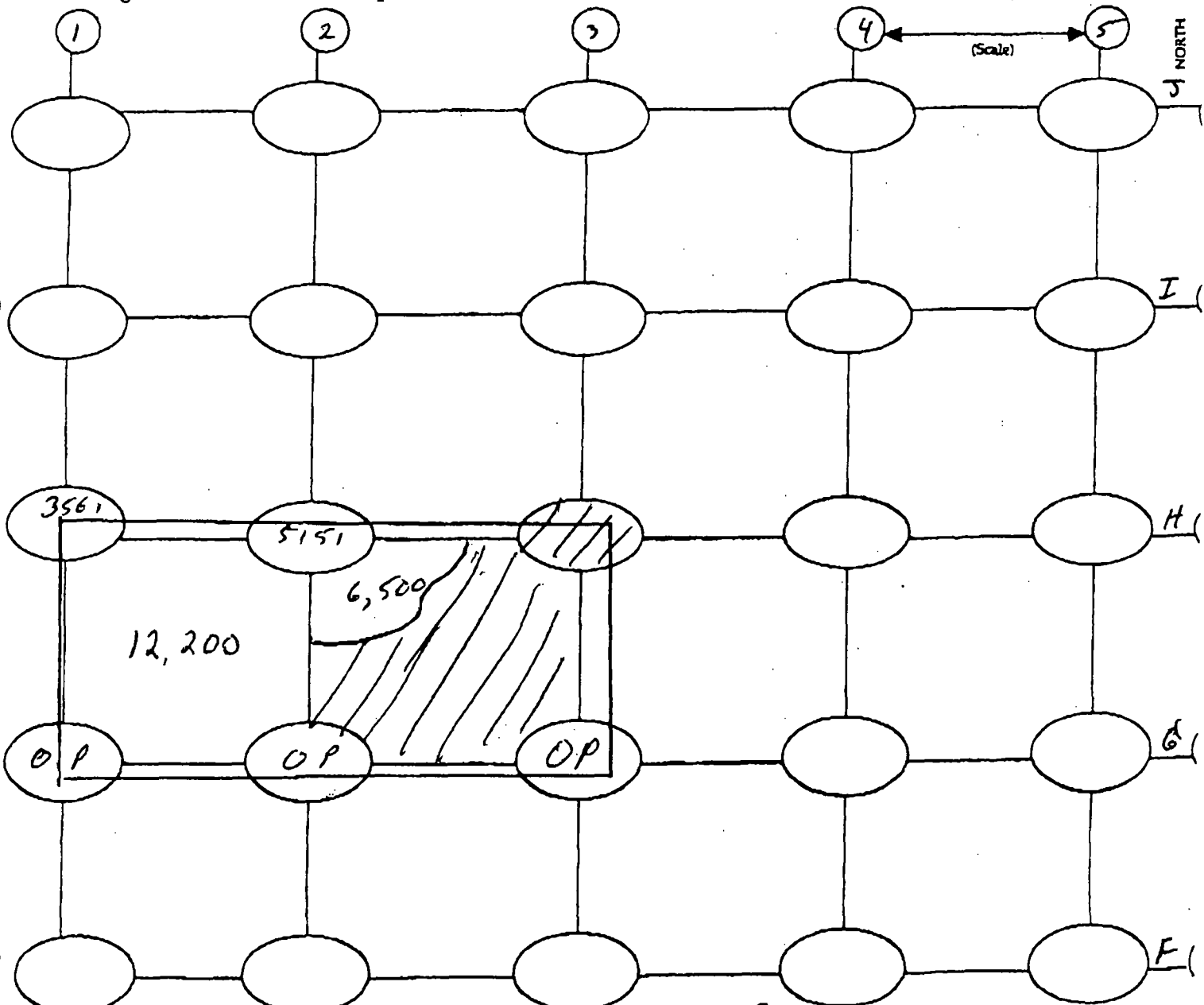
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded ☒ Not Shielded

Lift Elevation 73'

Background 3 k - 8 k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Pose
 = Exclusion zone boundary



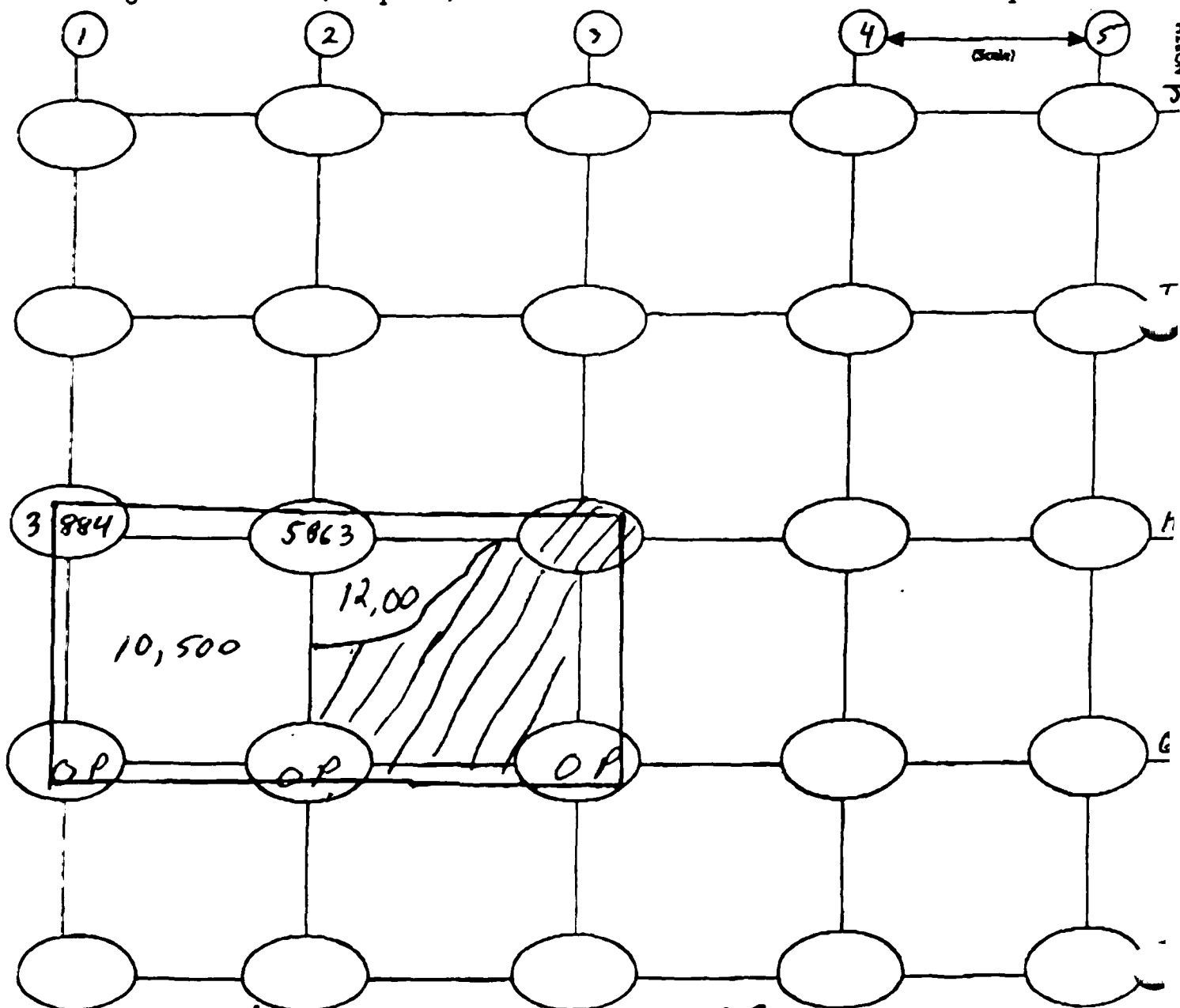
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 6

STS Consultants, Ltd.

Date 9-31-02Technician L D SniderInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 34-84 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP = Over Pose
= Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 7-31-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

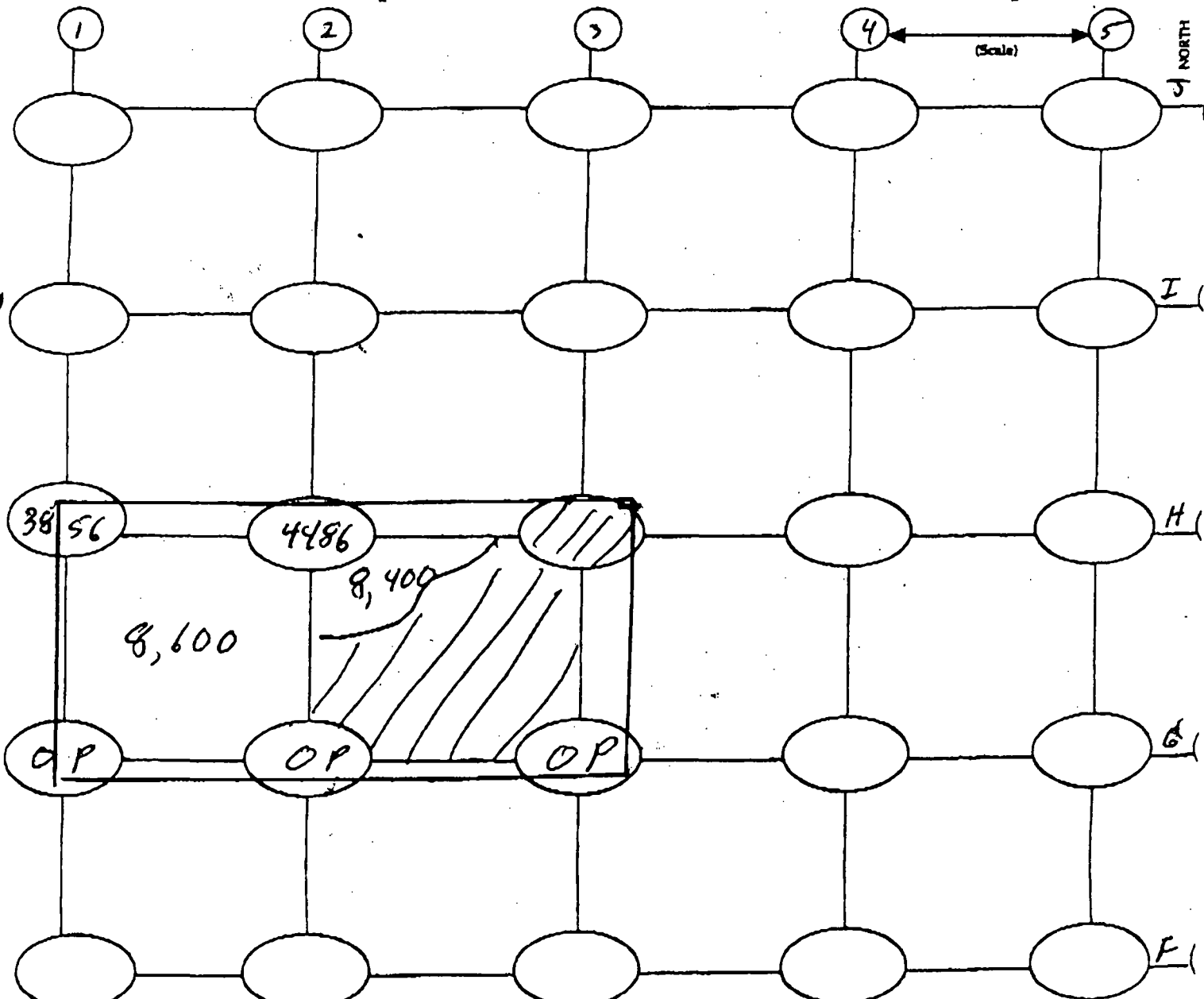
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 3 A - 8 A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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STS Consultants, Ltd.

Date 7-31-02

Technician LD Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

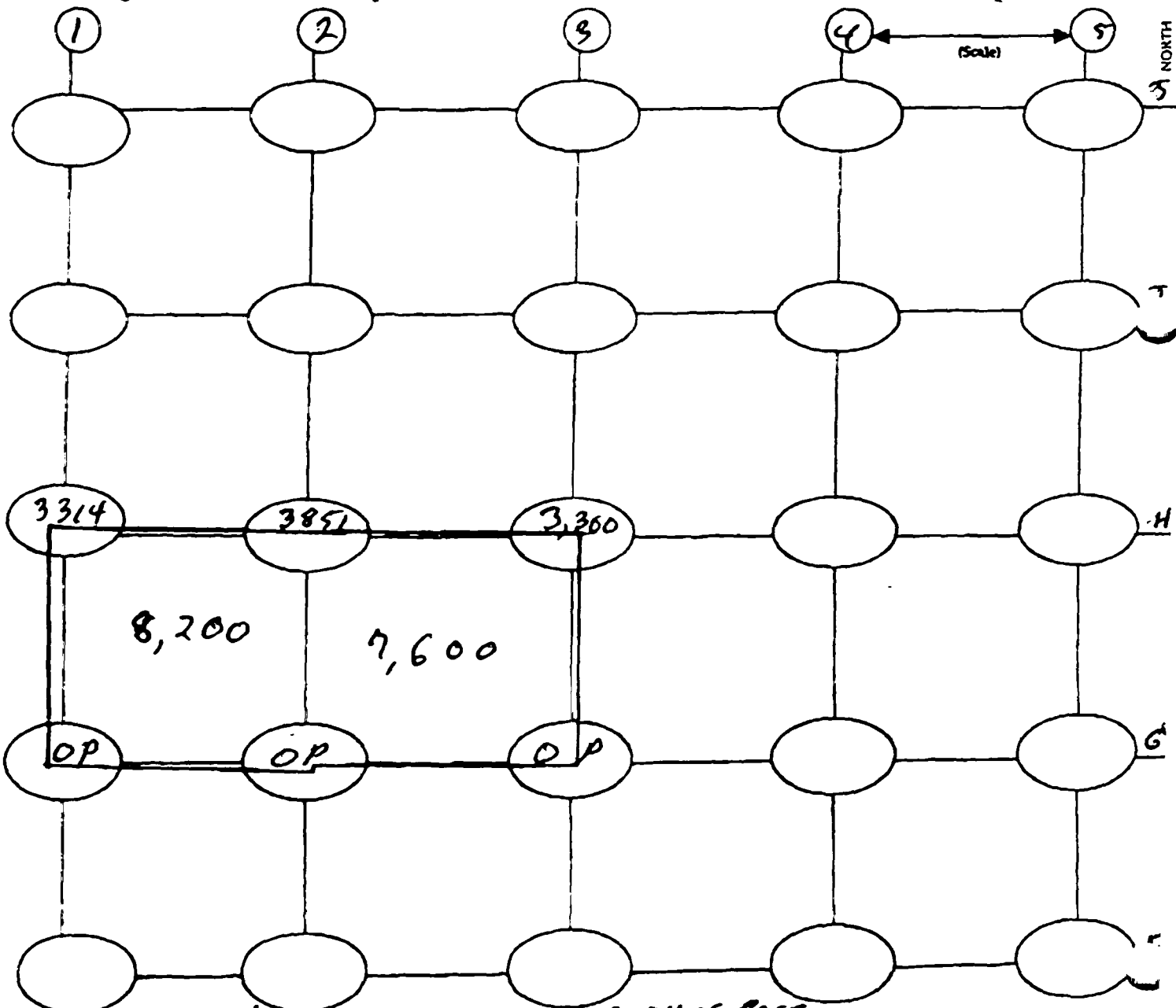
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 3k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 8-2-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Model # 127242 Probe # 168144

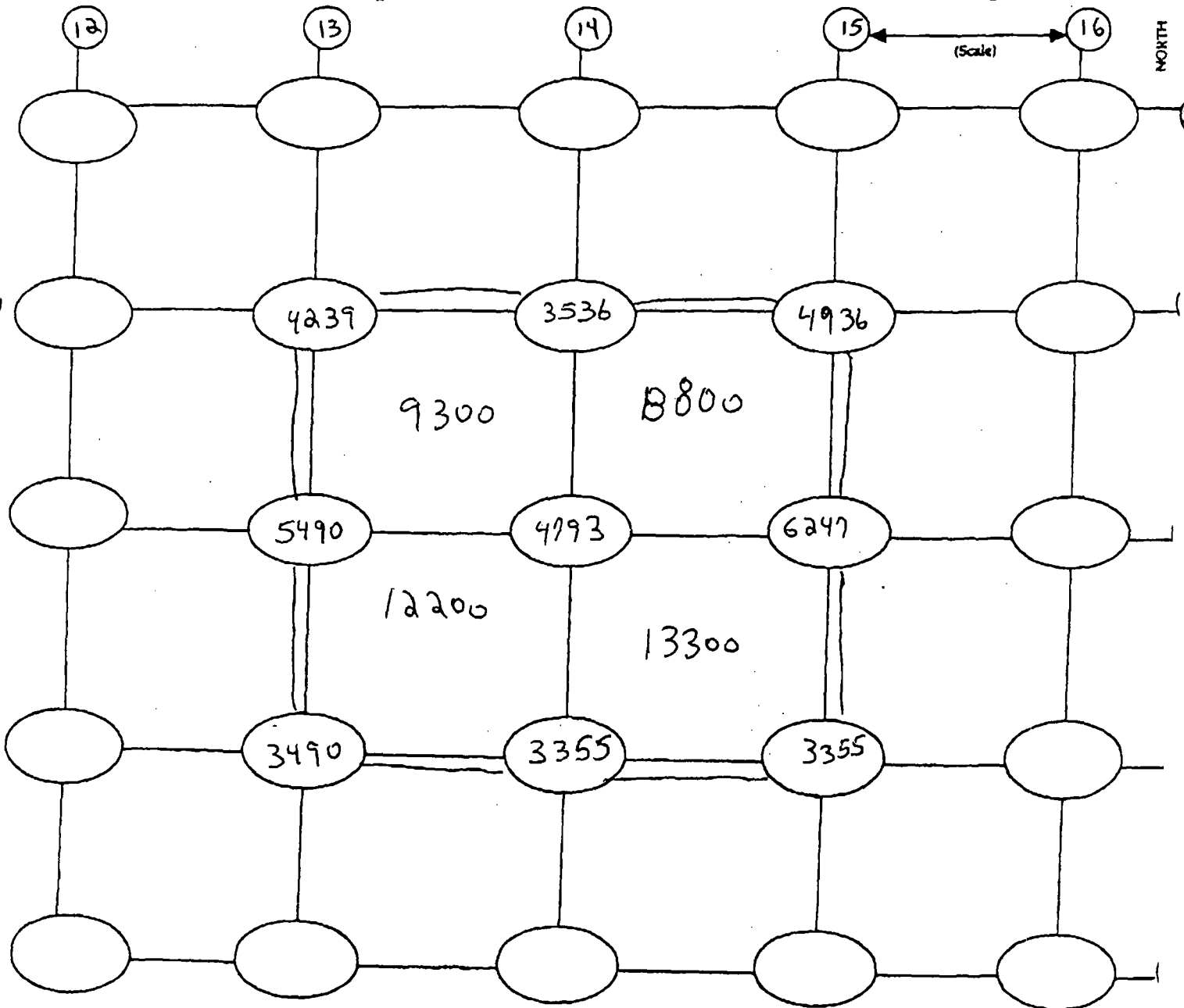
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation SURFACE

Background 5-10 Kcpm cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 8-2-02

Technician Justin Rubben

Inst. Model Colum 2221

Serial No. 127242 168144

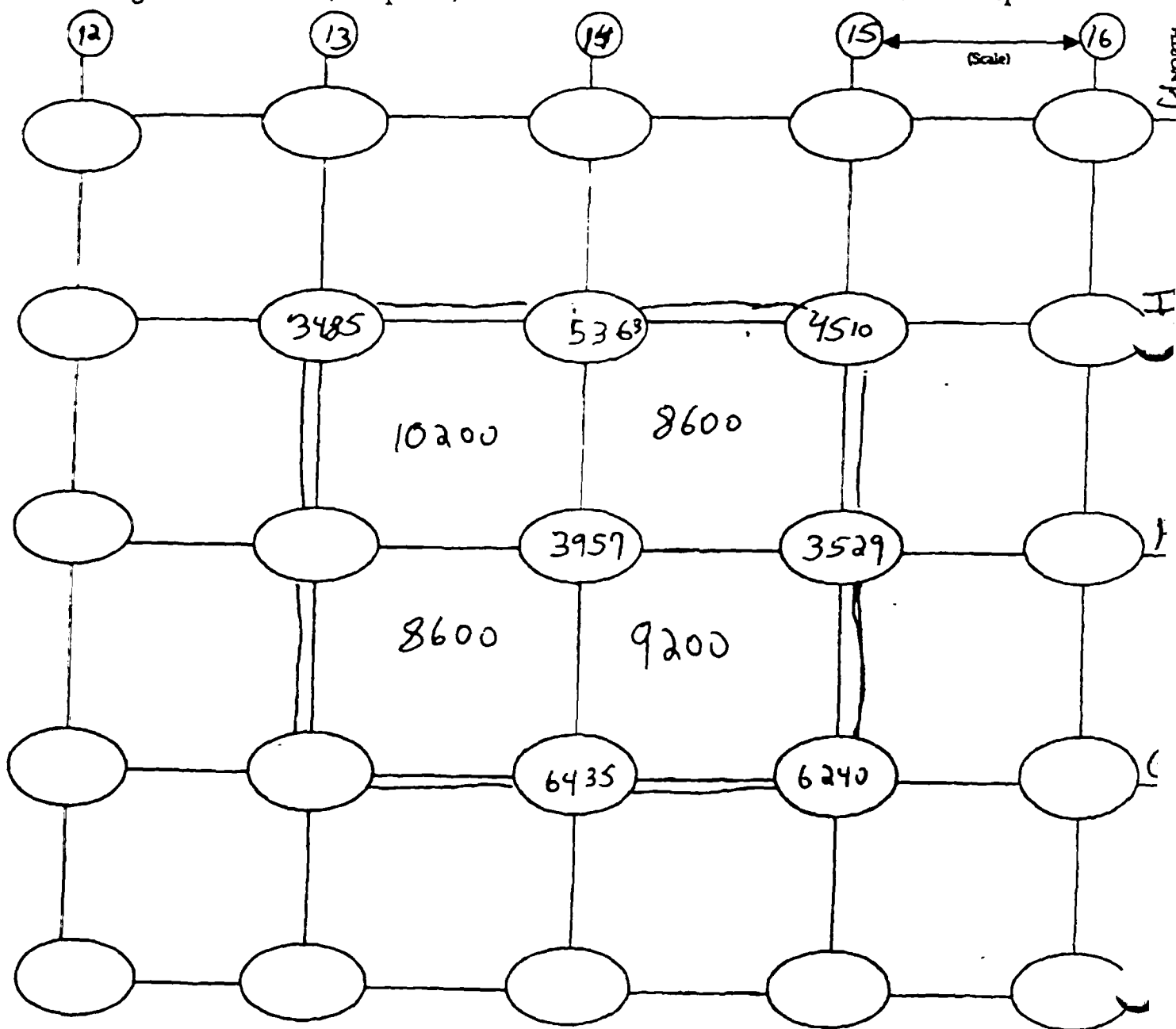
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5 ft

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 8-2-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Serial No. 1.317242 168144

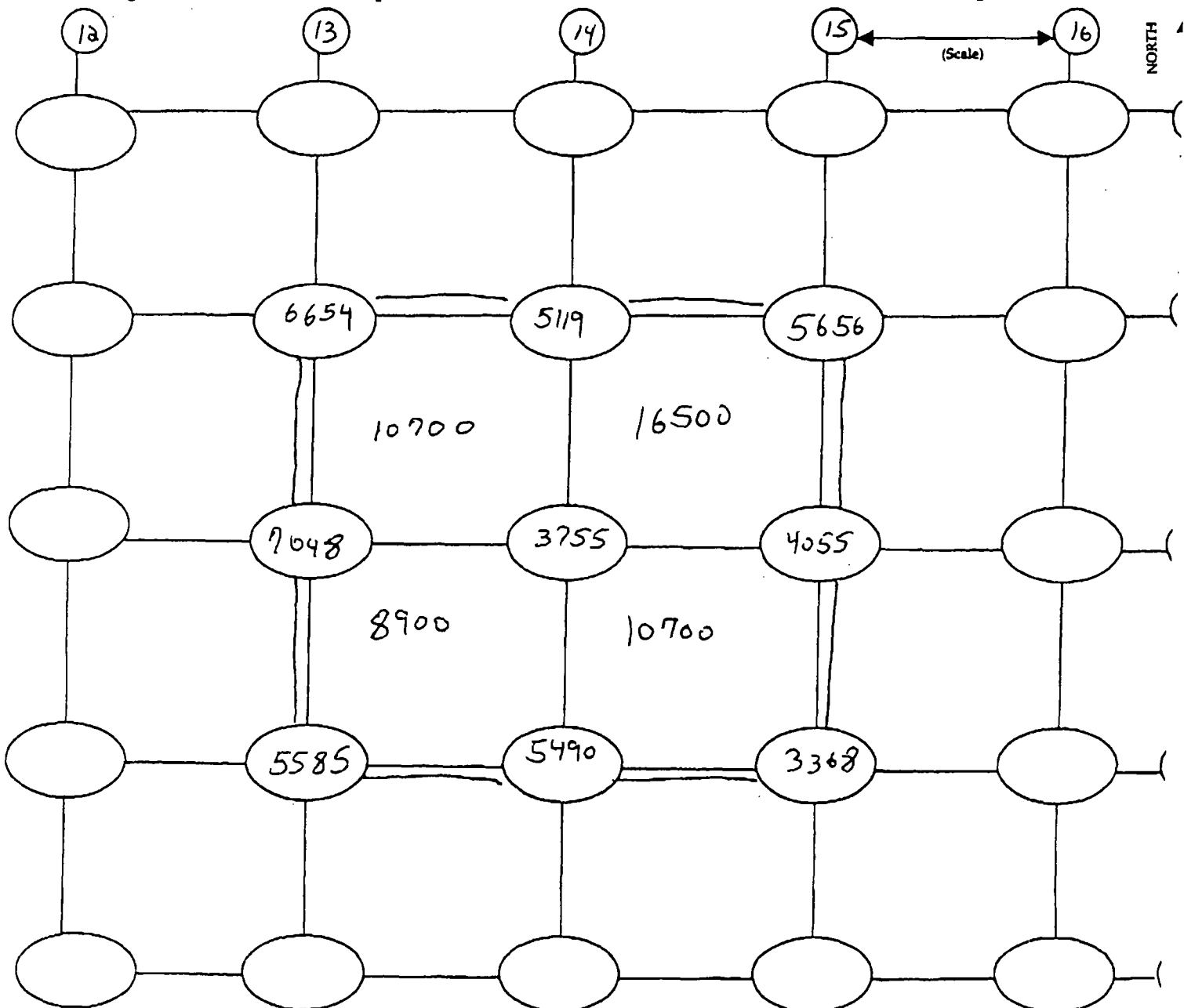
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -3 ft

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants Ltd

Date 8-2-02

Technician Justin Hubbert

Inst Model Ludum 2231

SERIAL # 127242 PROB# 168144

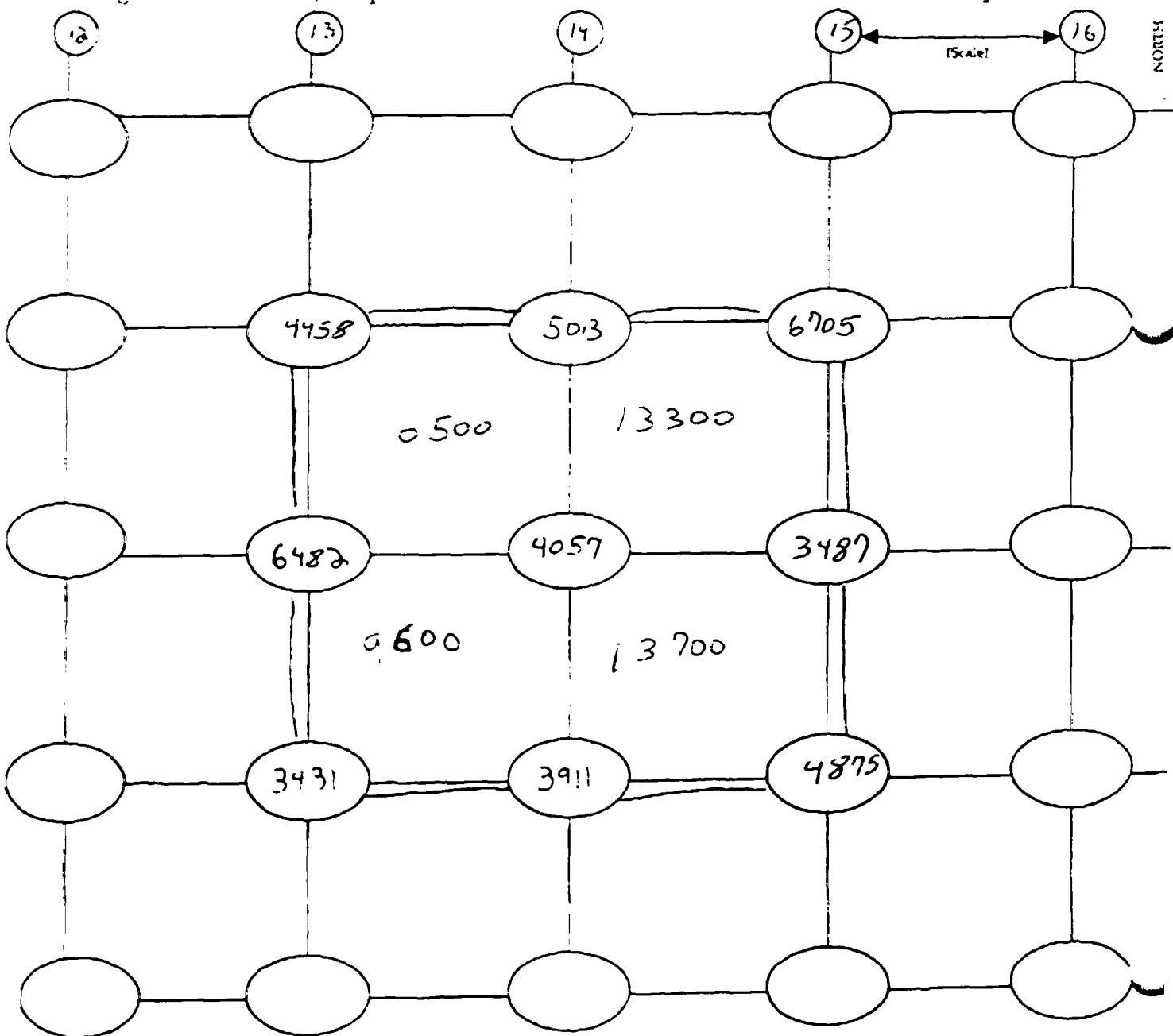
Probe Type: 1'x1' NaI ☒ 2'x2' NaI ☐
Shielded ☐ Not Shielded ☒

Lift Elevation -4.5 ft

Background 5-10 K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 8-2-02

Technician Justin Hubbert

Inst. Model Ludlum 2201

Model # 127242 Probe # 168144

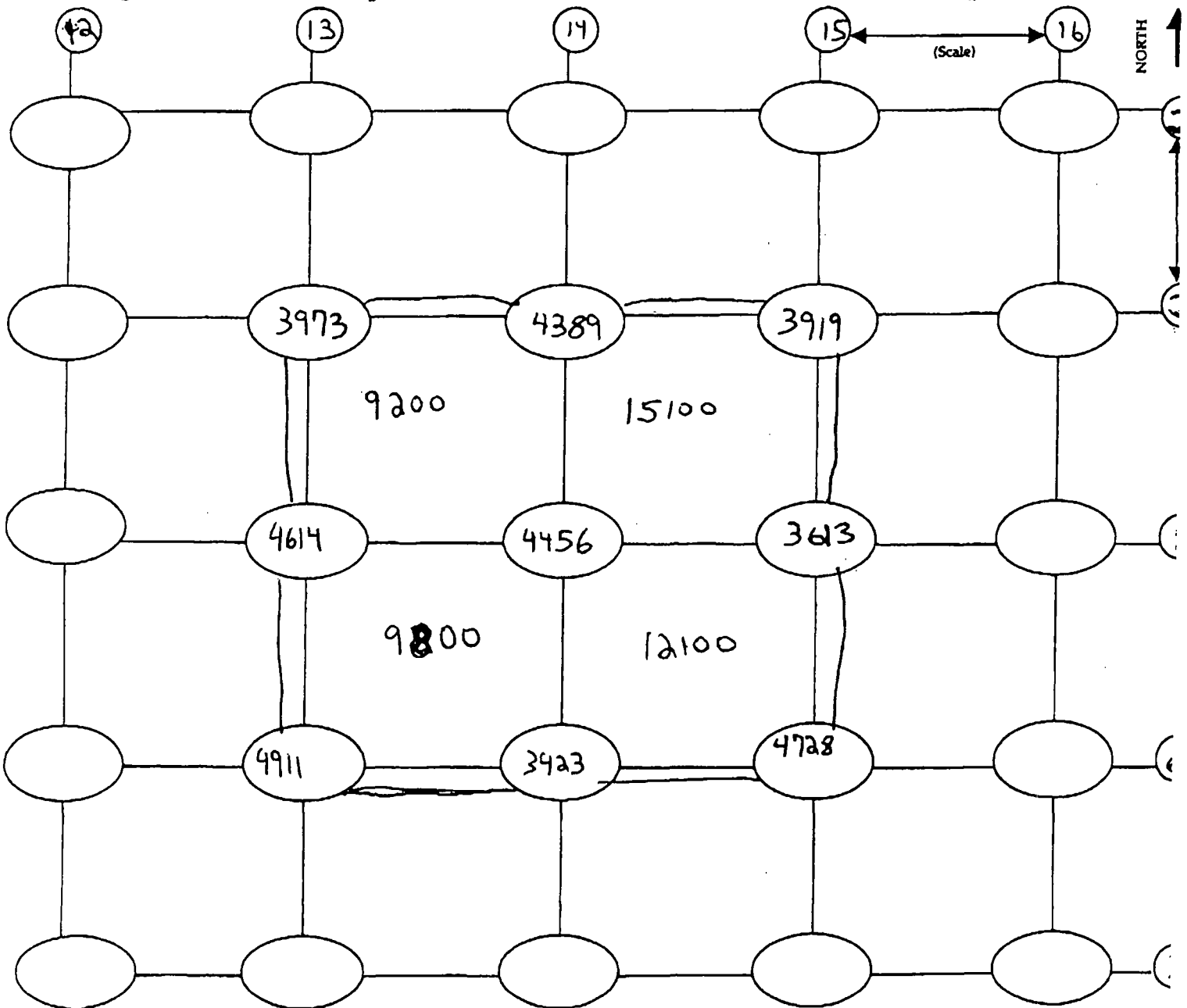
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation Surface - 6 ft

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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STS Consultants, Ltd.

Date 8-2-02

Technician Justin Hubbert

Inst. Model Luplum 2221

Serial # 187842 Probe # 168144

Serial No. 187842 Probe # 168144

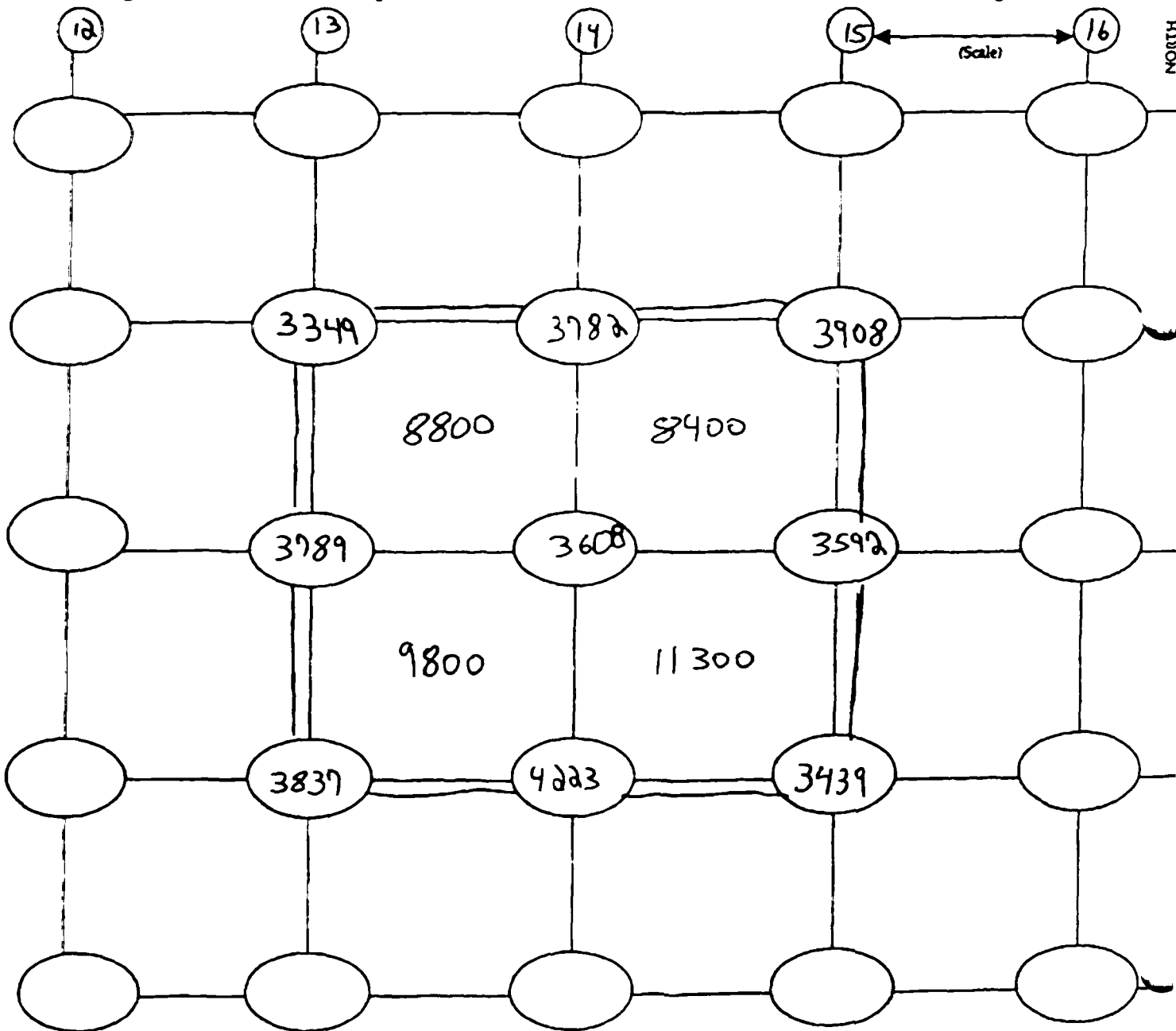
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 1 of 6

Date 8-1-02

Technician L D Smith

Inst. Model Ludlum 2221

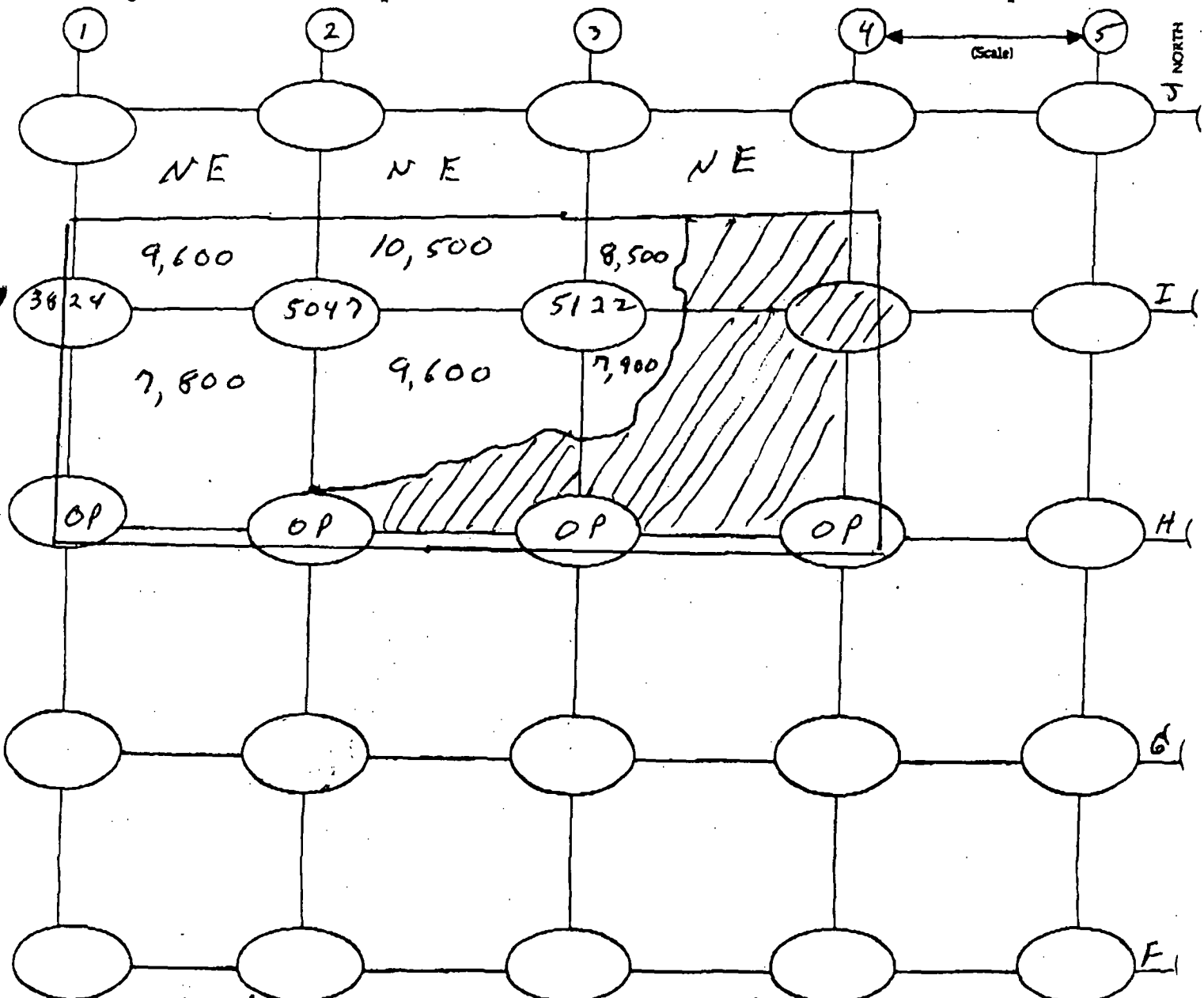
meter # 126496 Probe # 168493

Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation Surface

Background 24-54 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other phase
Exclusion zone boundary NE = Not excavated



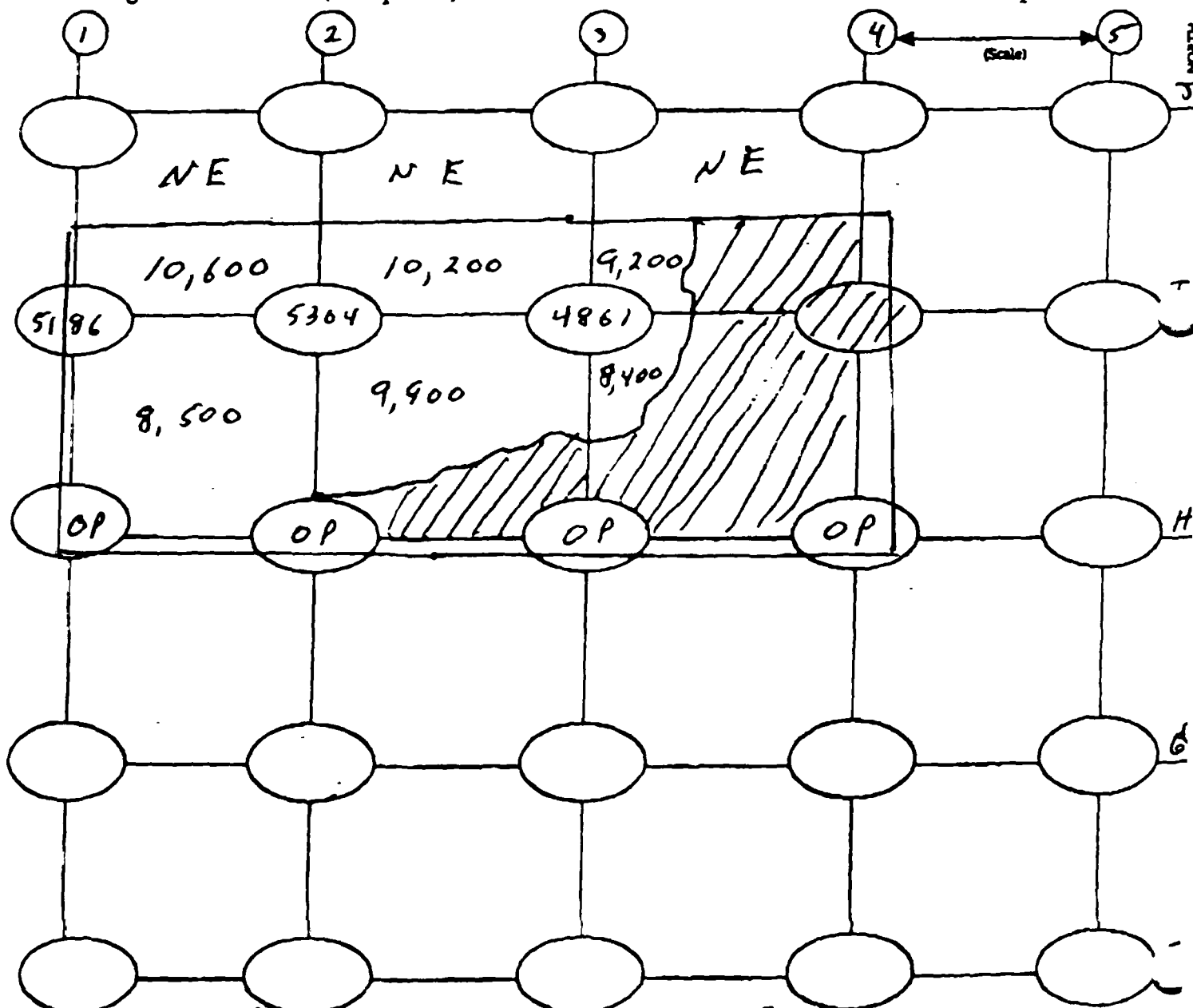
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 8-1-02Technician L D SmithInst. Model Ludlum 2221Serial No. 126496 / 168493Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 24-5h cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OPs over pass
Exclusion zone boundary NE = NOT excavated

RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 6

Date 8-1-02

Technician I D Smith

Inst. Model Ludlum 2221

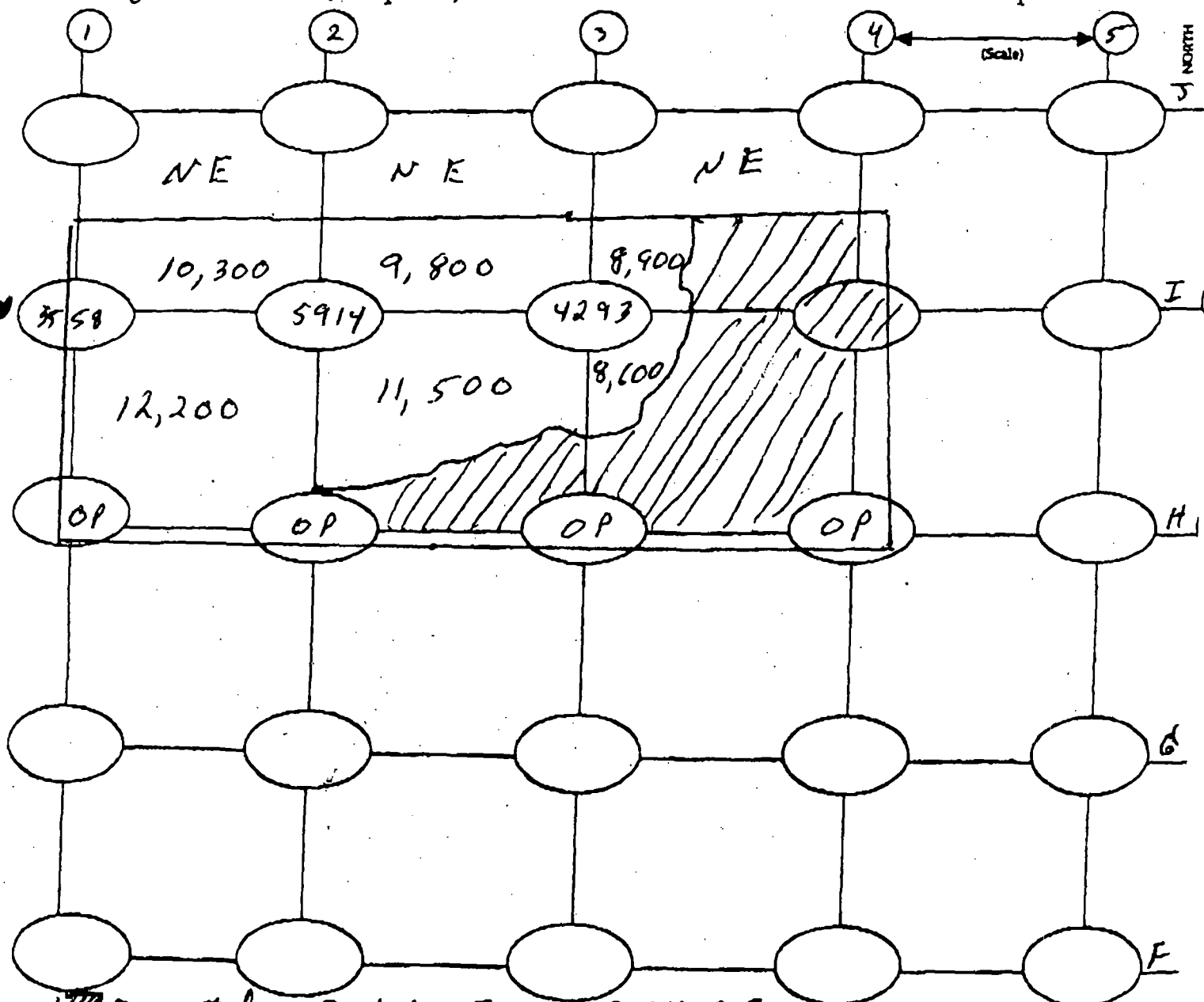
Motor #	Prob. #
126496	168493

Probe Type: 1'x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation - 3'

Background 24-54 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OR Other use
 = Exclusion zone boundary NE = NOT excavated



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

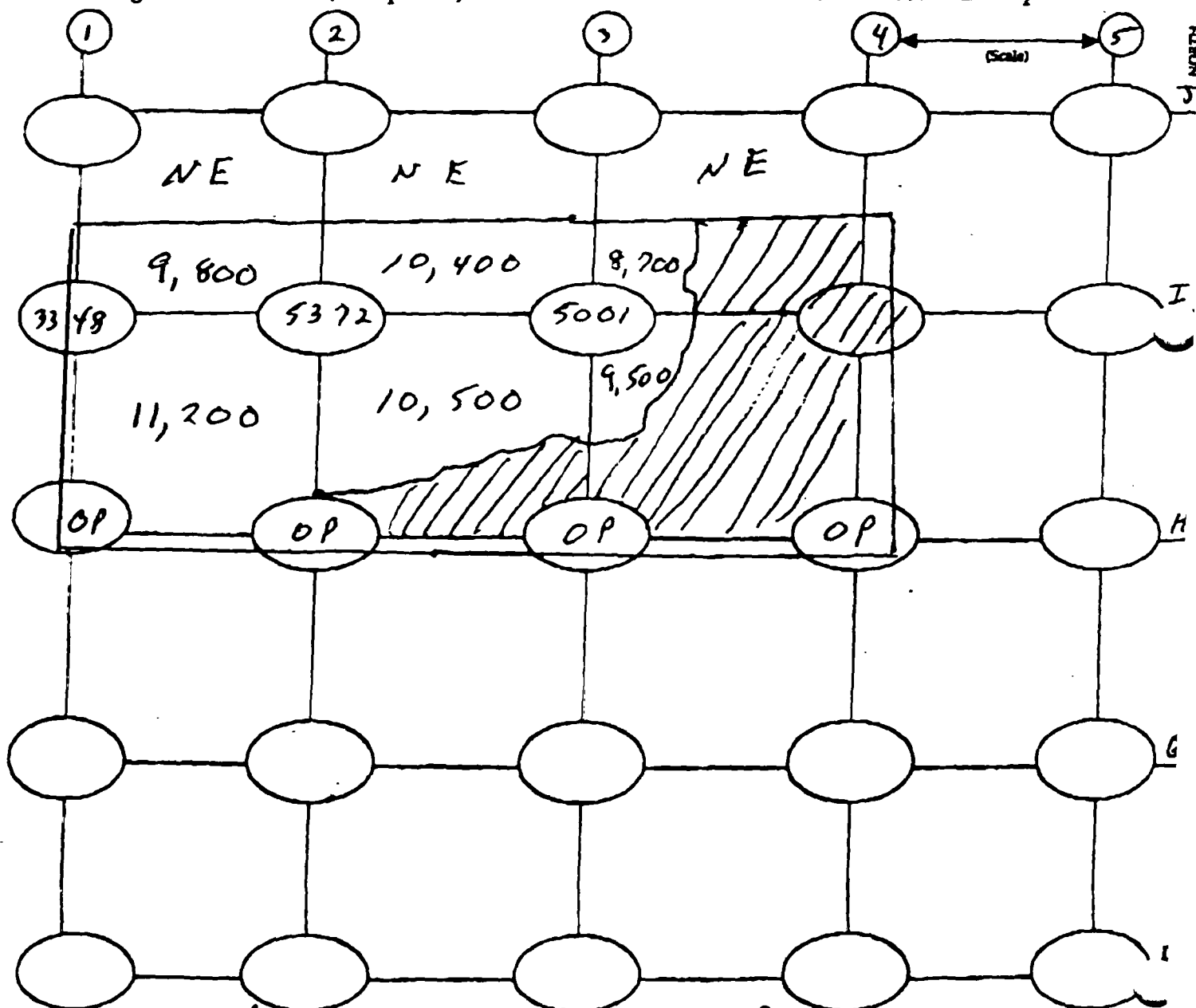
STS Corporation, Ltd.

Date 8-1-02

Technician _____

Inst. Model Ludlum 2221Serial No. 126496 / 168493Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 24-54 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Pose
* = Exclusion Zone boundary NE = Not excavated

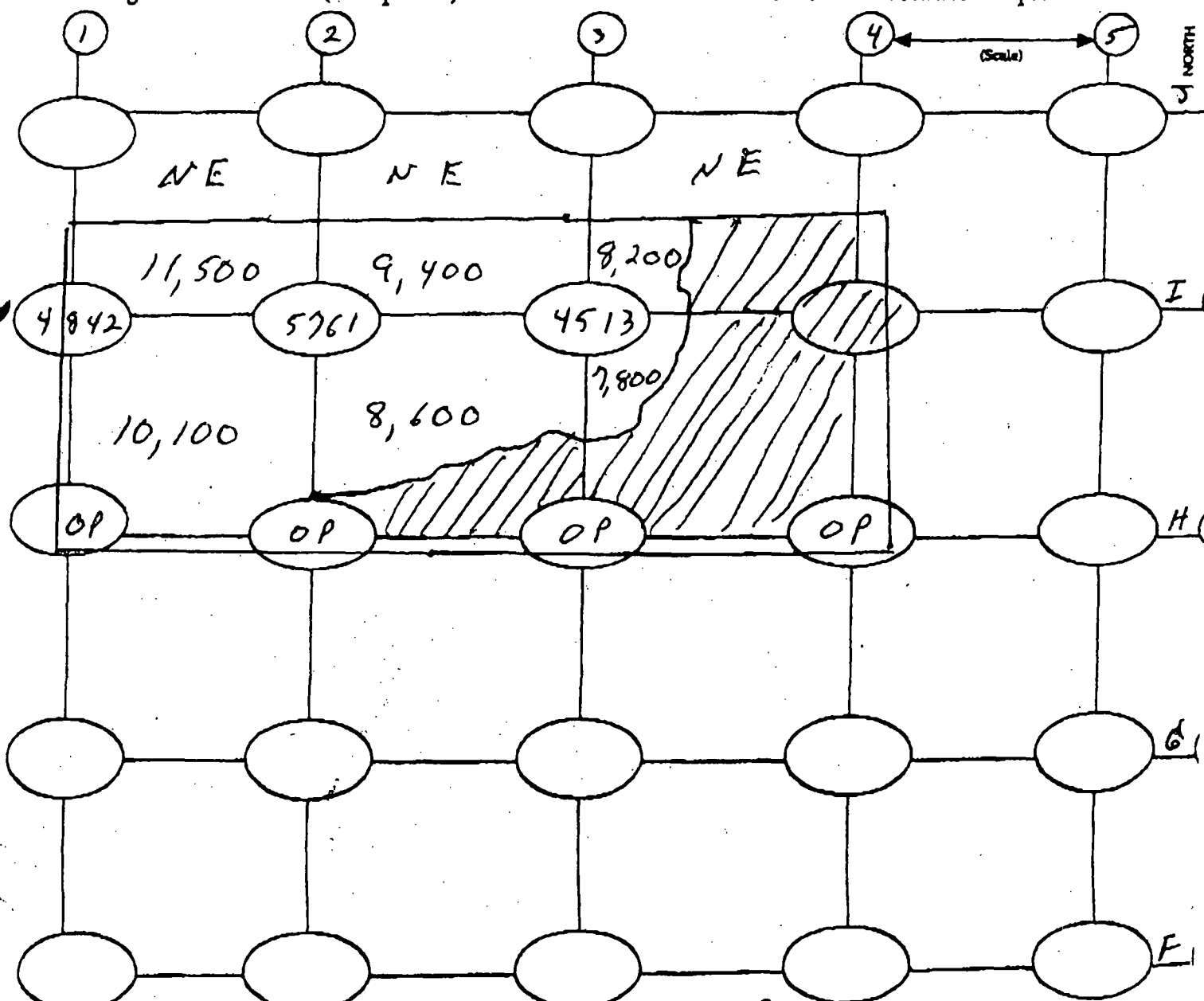


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 6Date 8-1-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168493Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 24-55 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Ex = Exclusion zone boundary NE = NOT excavated



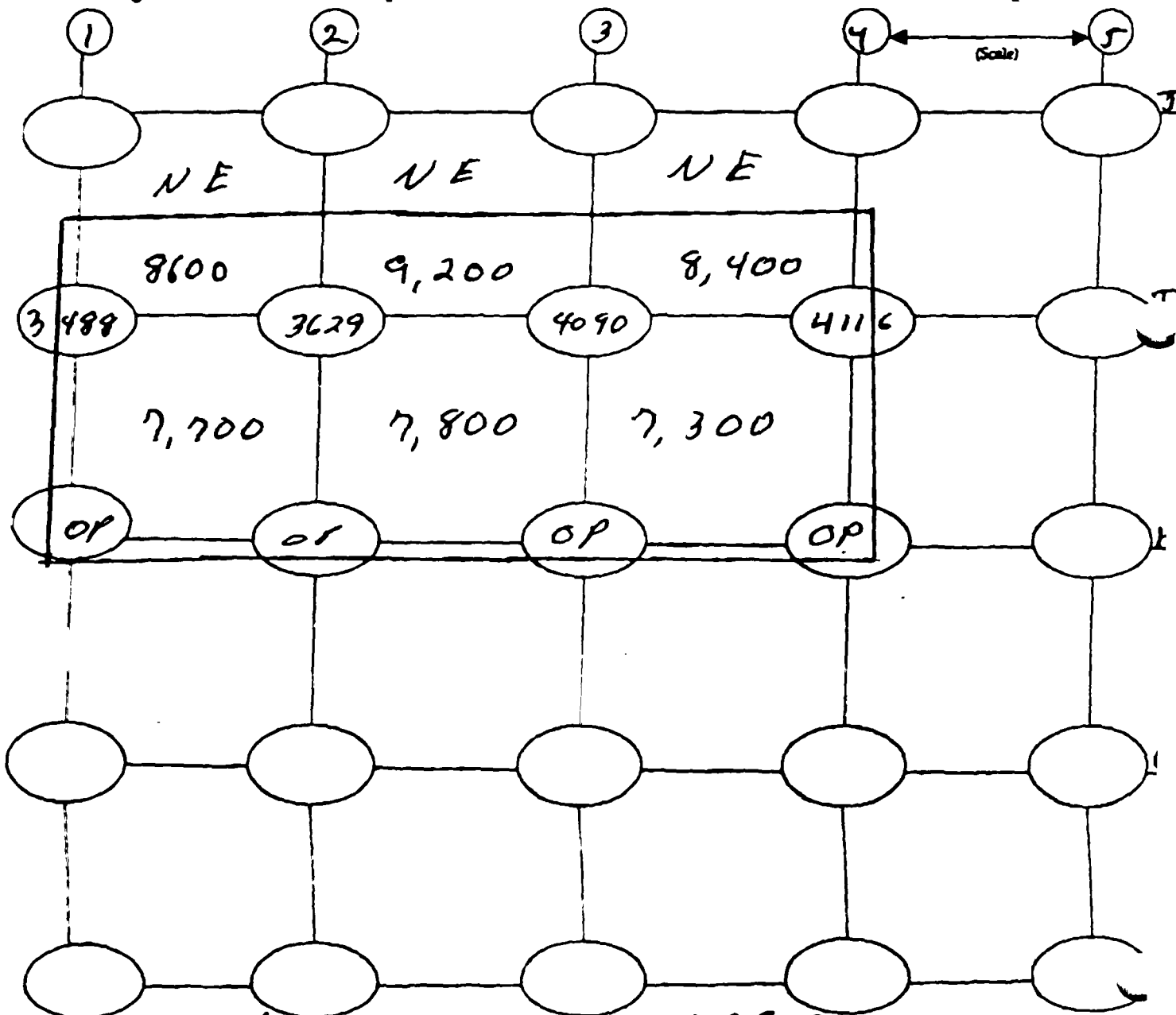
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 8-1-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168493Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded / Not ShieldedLift Elevation -7.5'Background 2K-5K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
Exclusion zone boundary NE = Not excavated



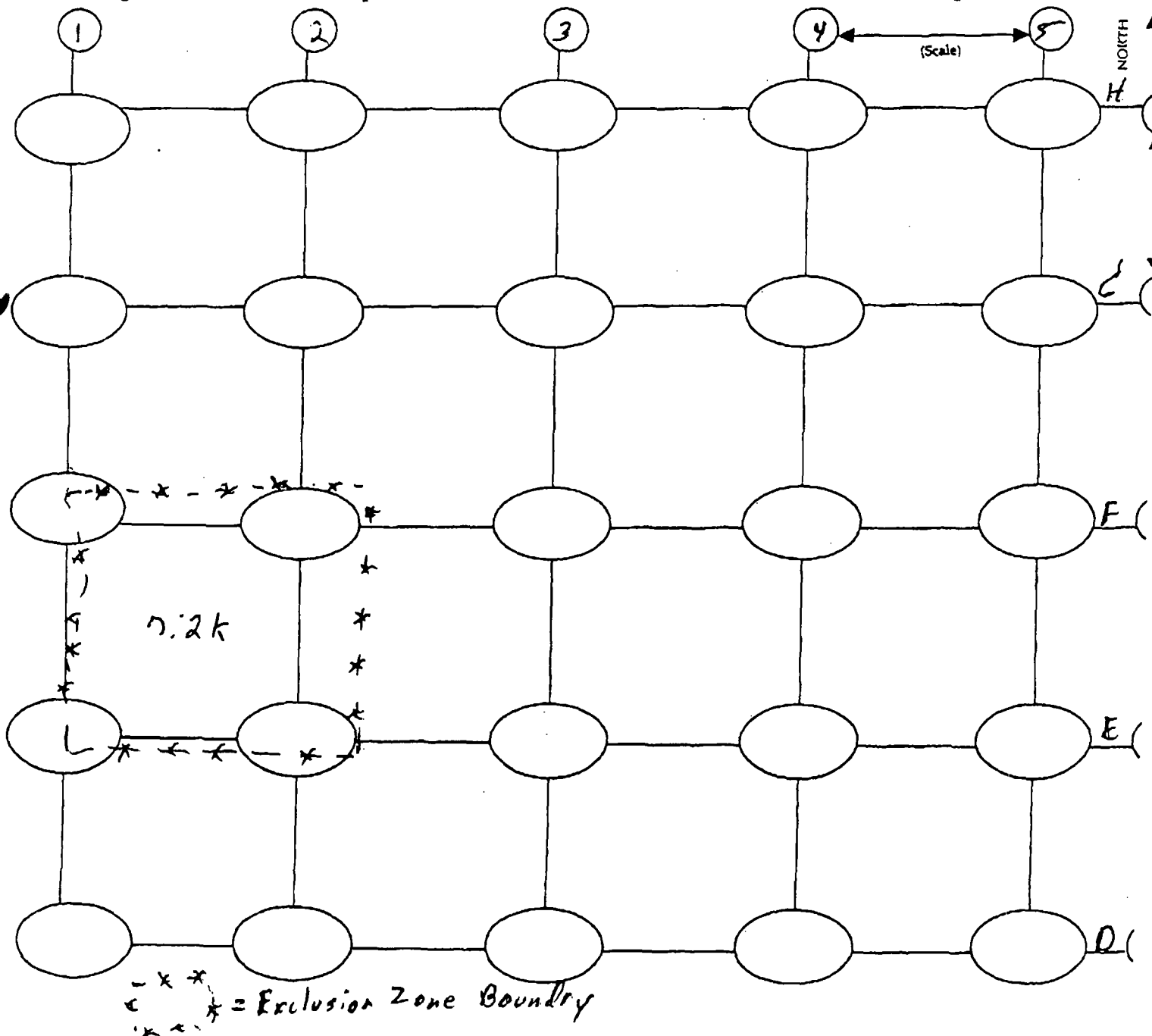
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 1

STS Consultants, Ltd.

Date 8-6-02Technician L D SmithInst. Model Luplum 2221Serial No. 126496/168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation Pre EPABackground 24-64 cpmAction Level 20,860 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 1

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

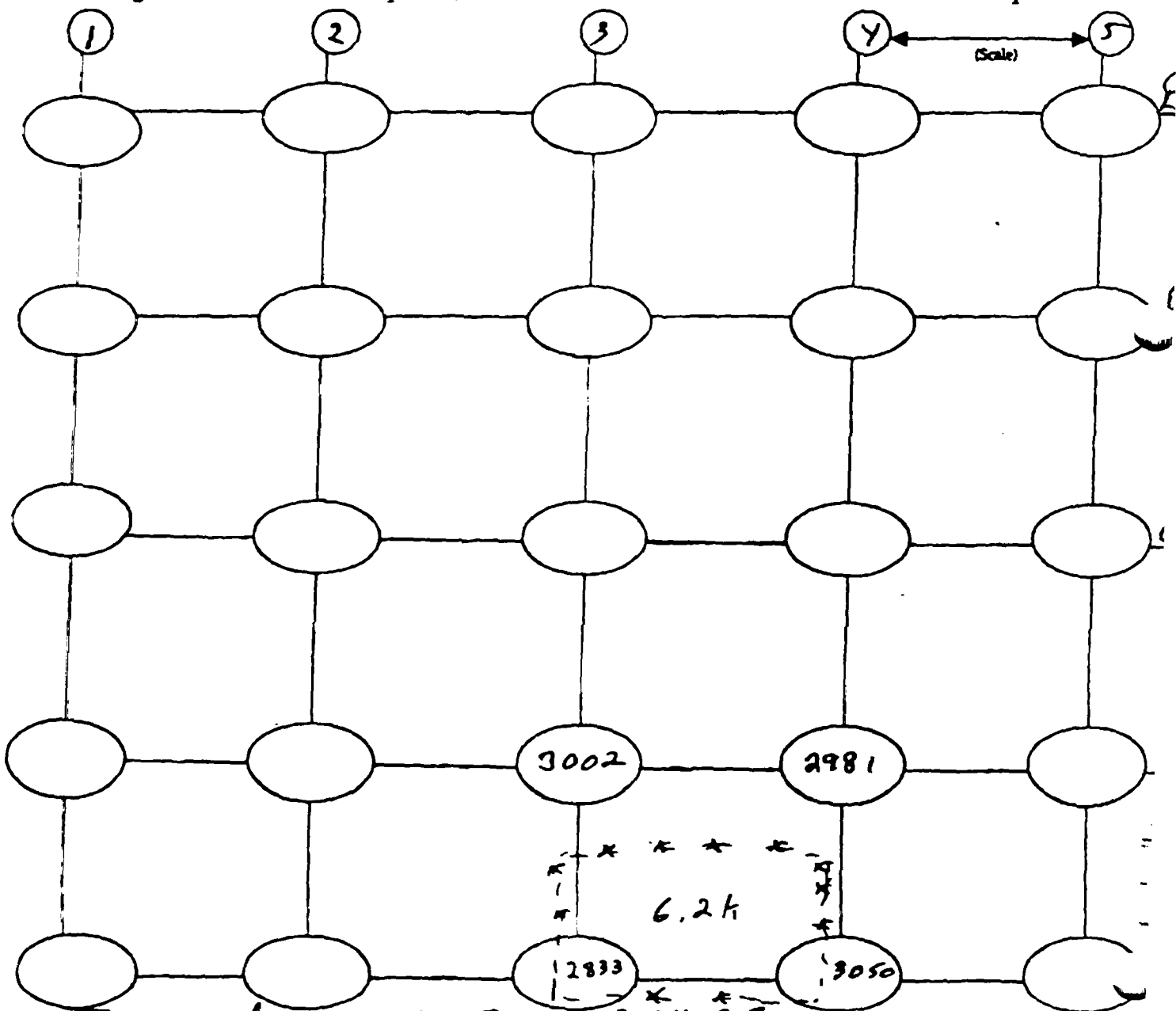
meter # 126996 Probe # 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Pre EPA

Background 2k-6k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OPs Omer Page
x = Exclusion zone boundary



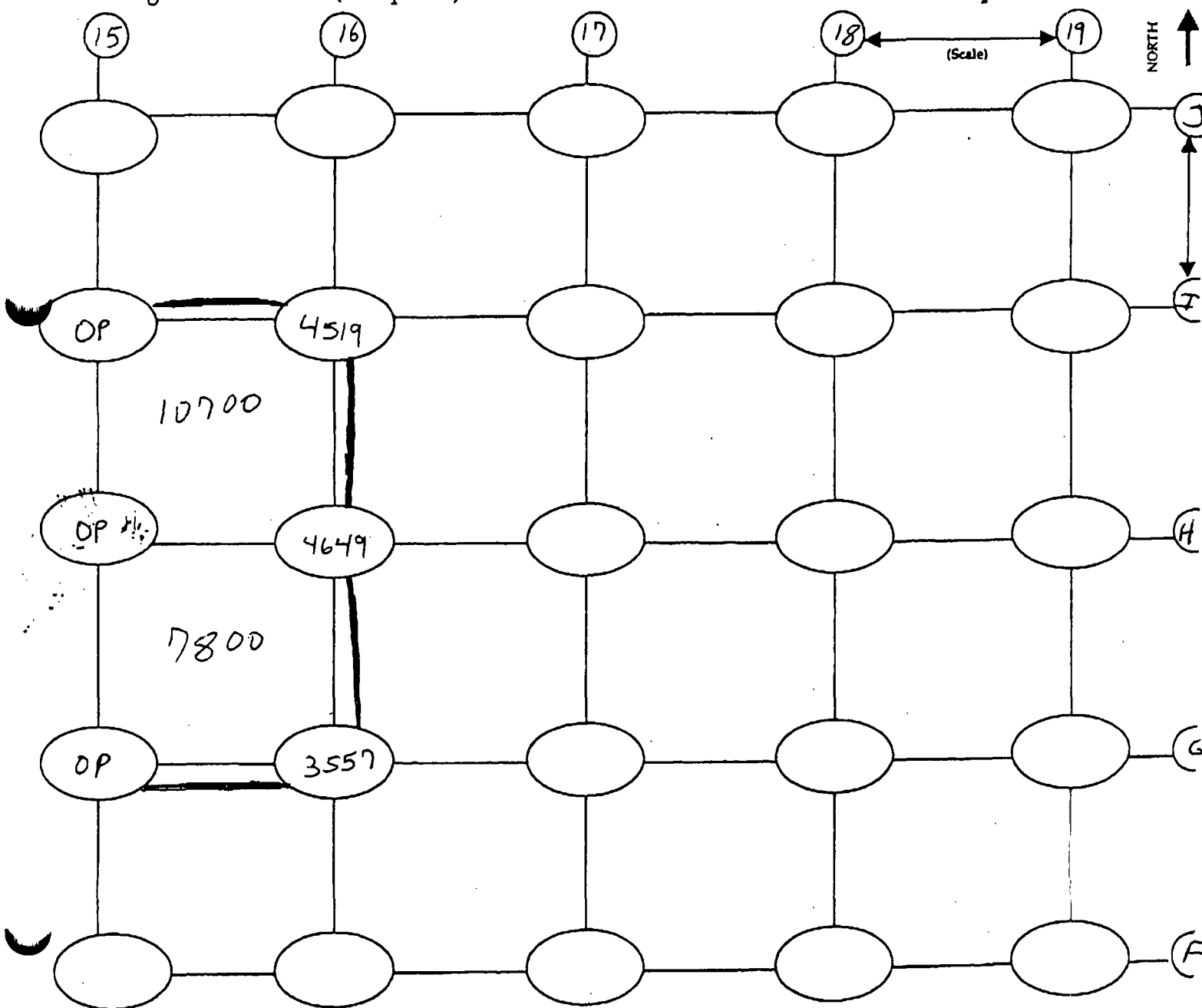
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd.

Date 8-7-02Technician Justin HubbertInst. Model Ludlum 2221Serial No. 126496 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SURFACEBackground 5-10 K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd.

Date 8-7-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

meter PROBE
Serial No. 126496 168143

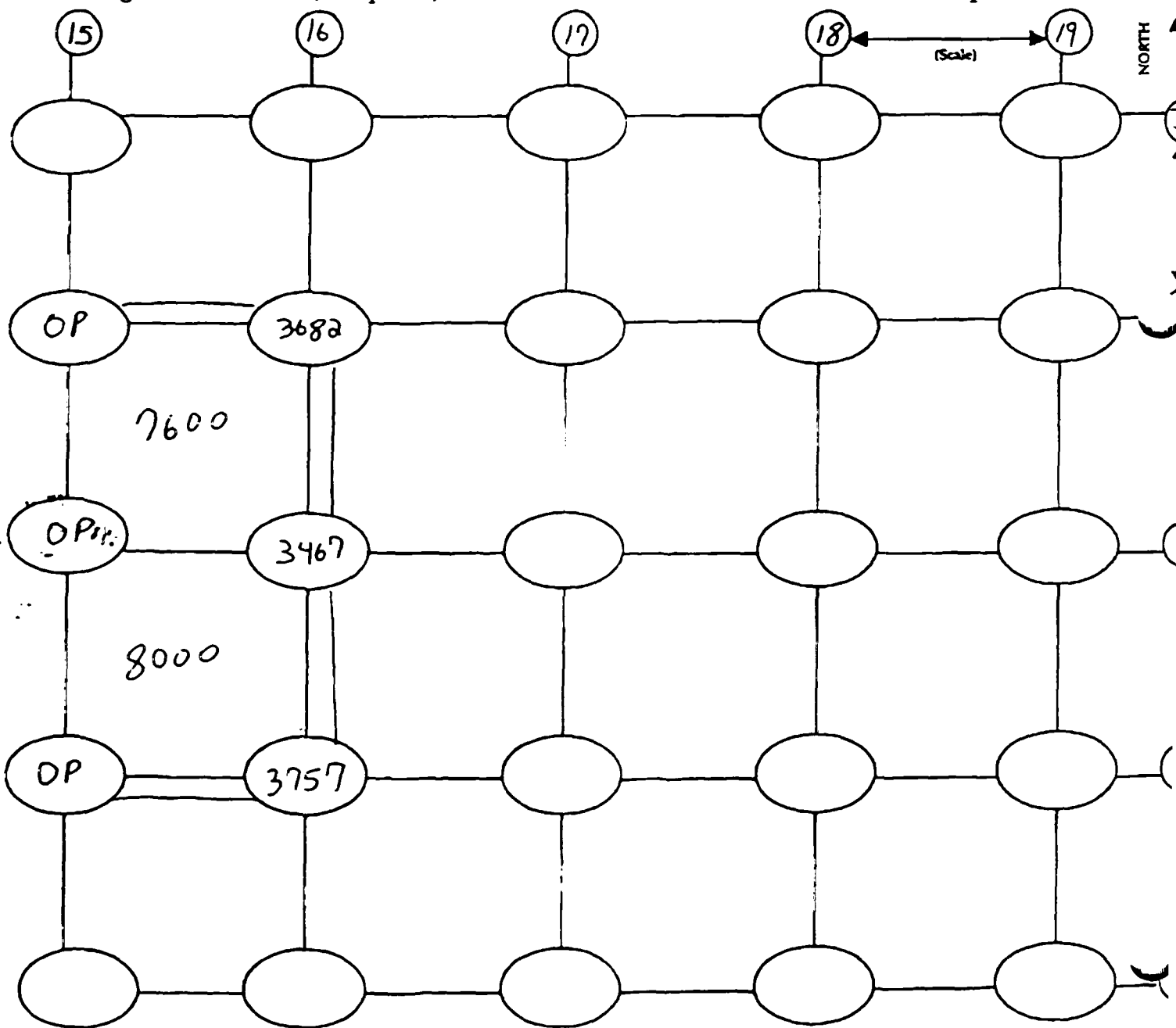
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5 ft

Background 5-10 K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page ____ of ____

STS Consultants, Ltd.

Date 8-7-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Serial No. meter 126496 PROBE 168143

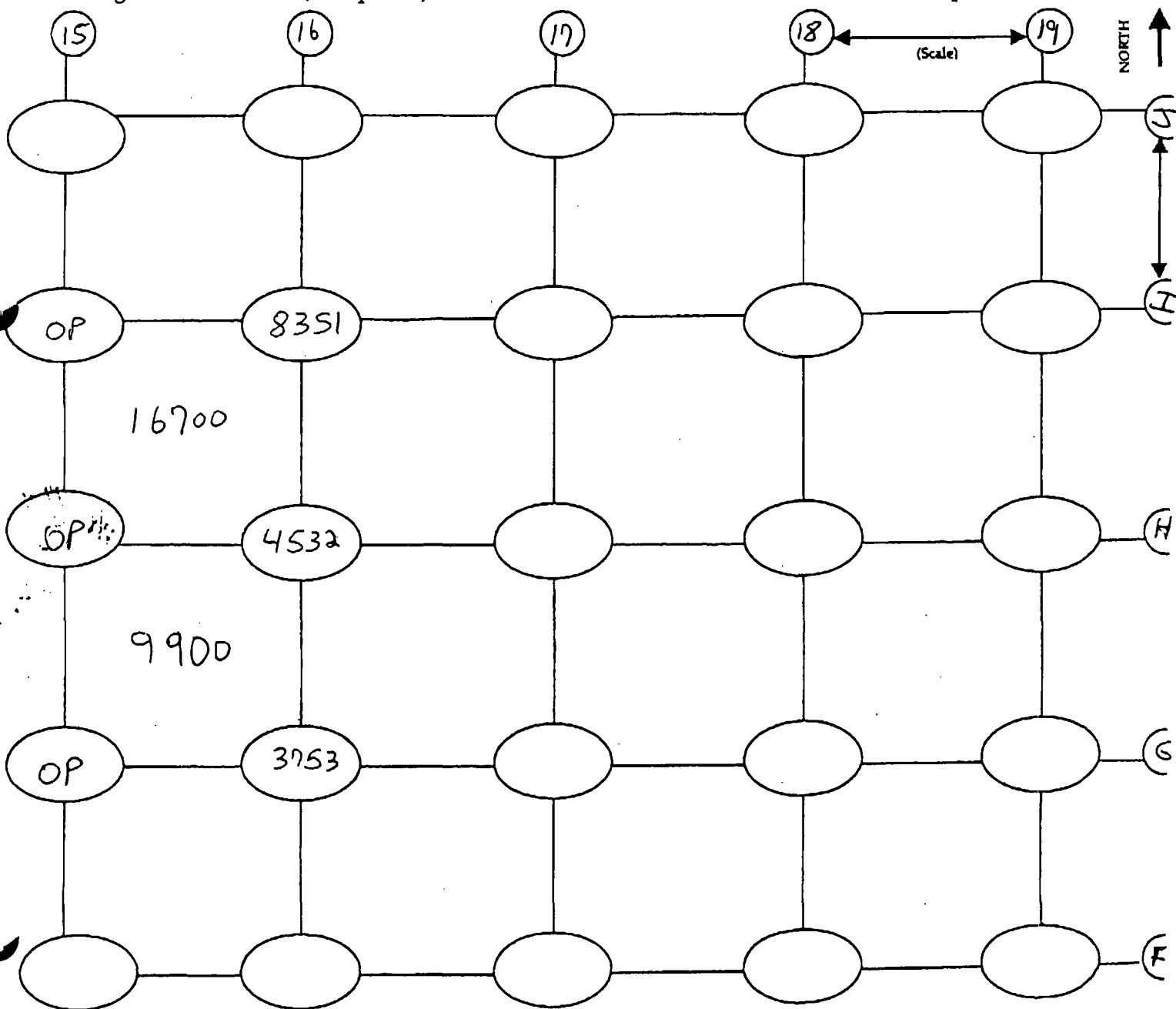
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -3 ft

Background 5-10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd.

Date 8-7-02

Technician JUSTIN HUBBERT

Inst. Model Ludlum 2221

Model # 126496 PROBE 168143

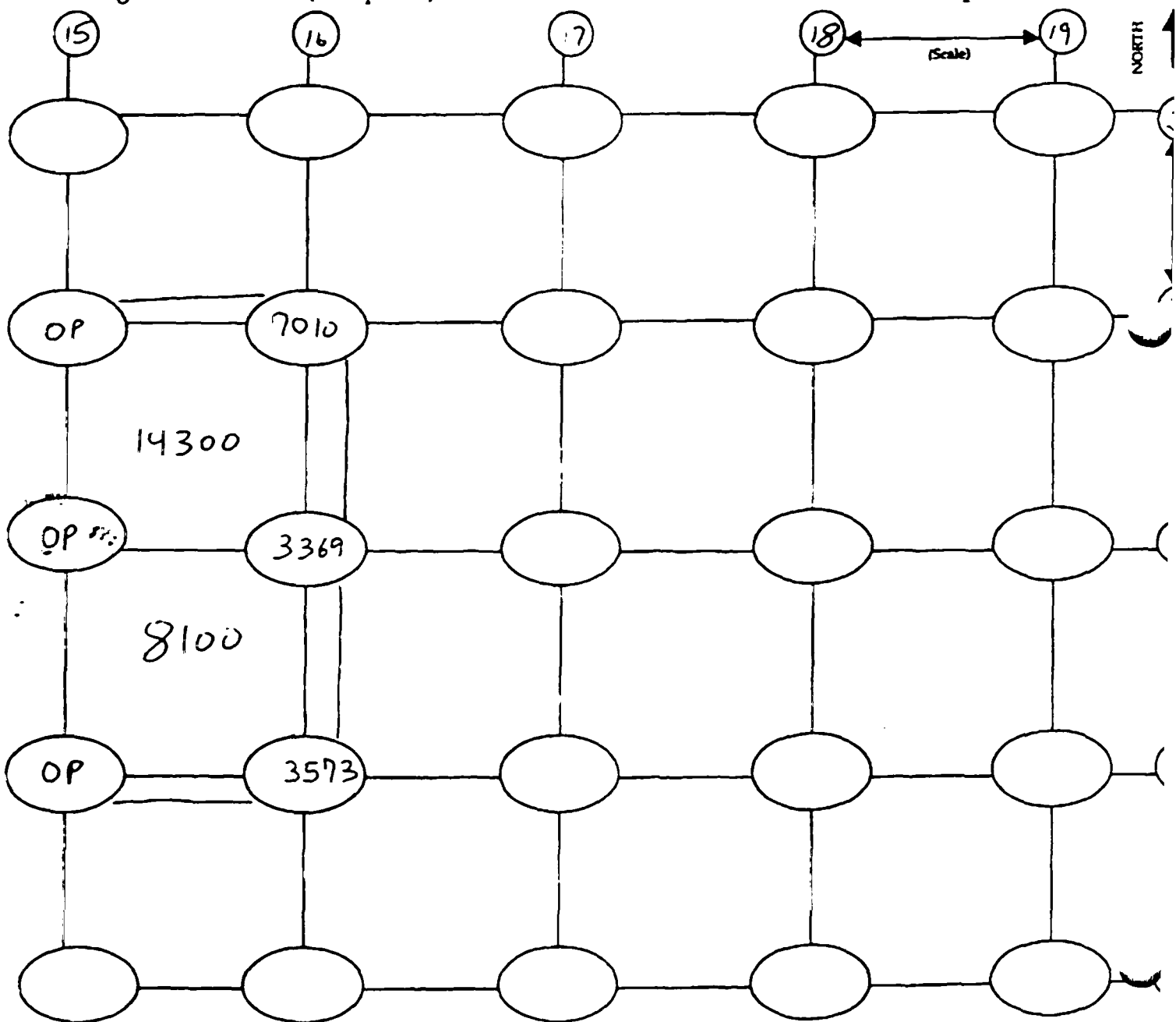
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5 ft

Background 5-10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd.

Date 8-7-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Model # PROBE
Serial No. 126496 168143

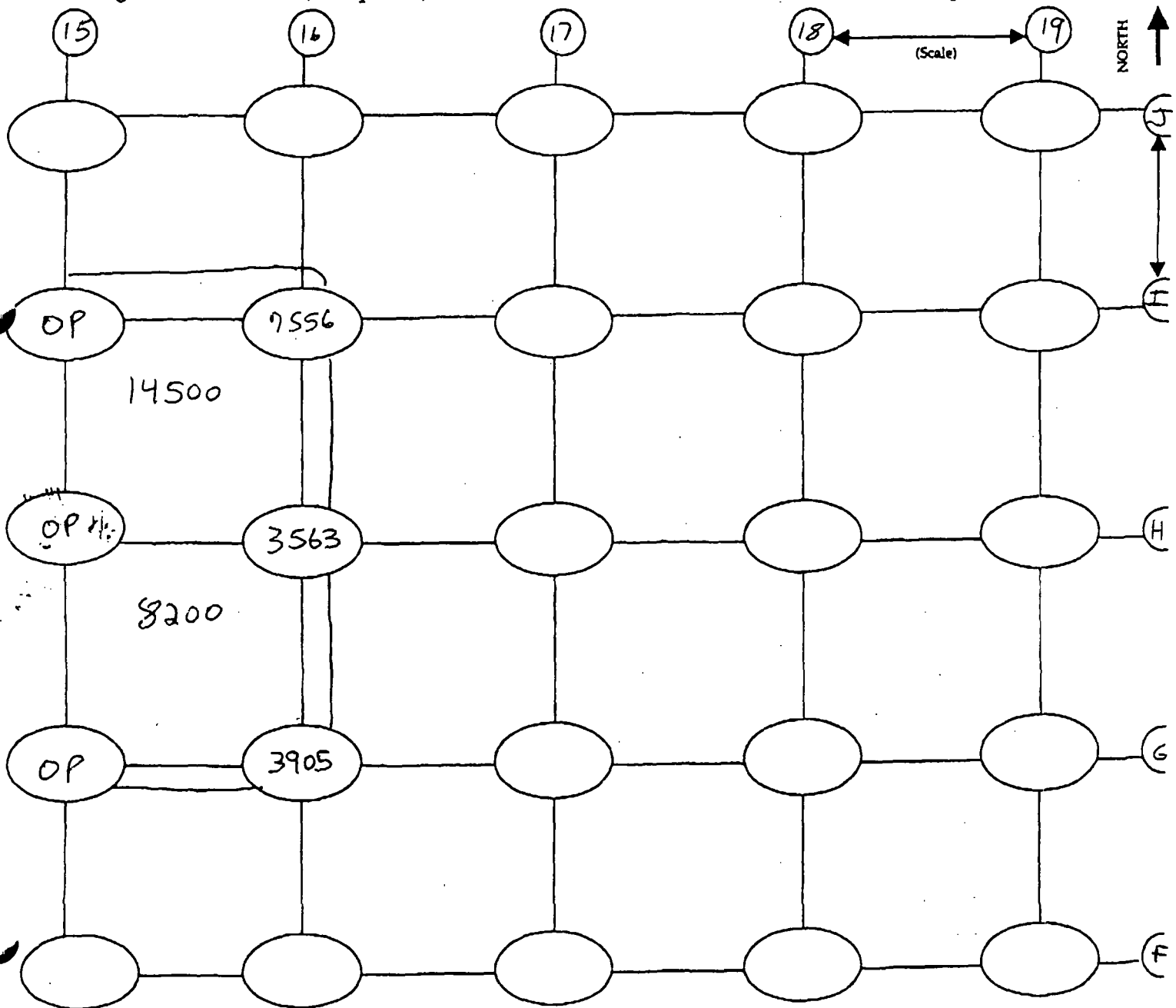
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6 ft

Background 5-10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page of

STS Consultants, Ltd.

Date 8-7-02

Technician Justin HUBBERT

Inst. Model Luplum 2221

meter 126496 PROBE 168143

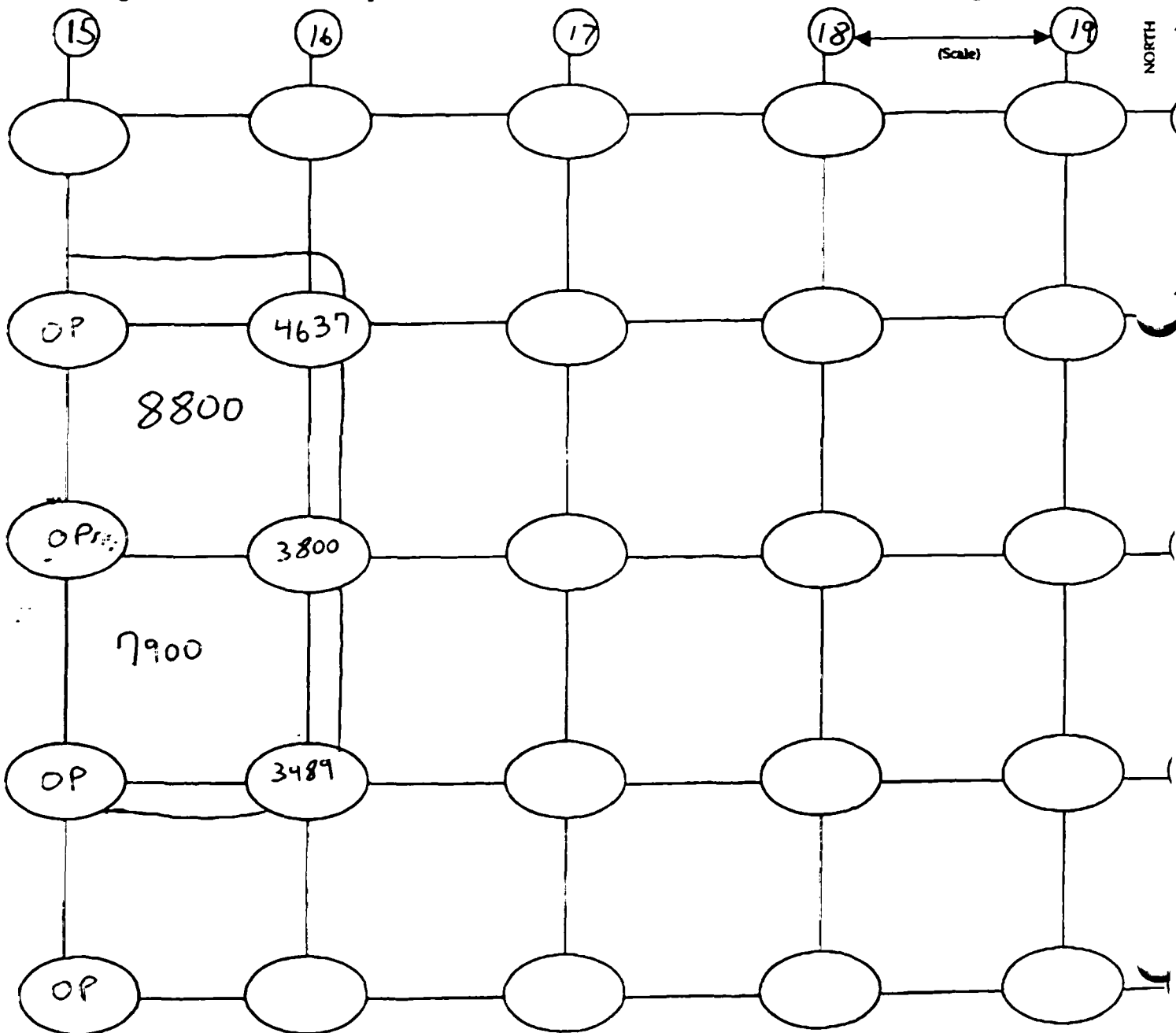
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5 Ft

Background 5-10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician LD Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143
Serial No.

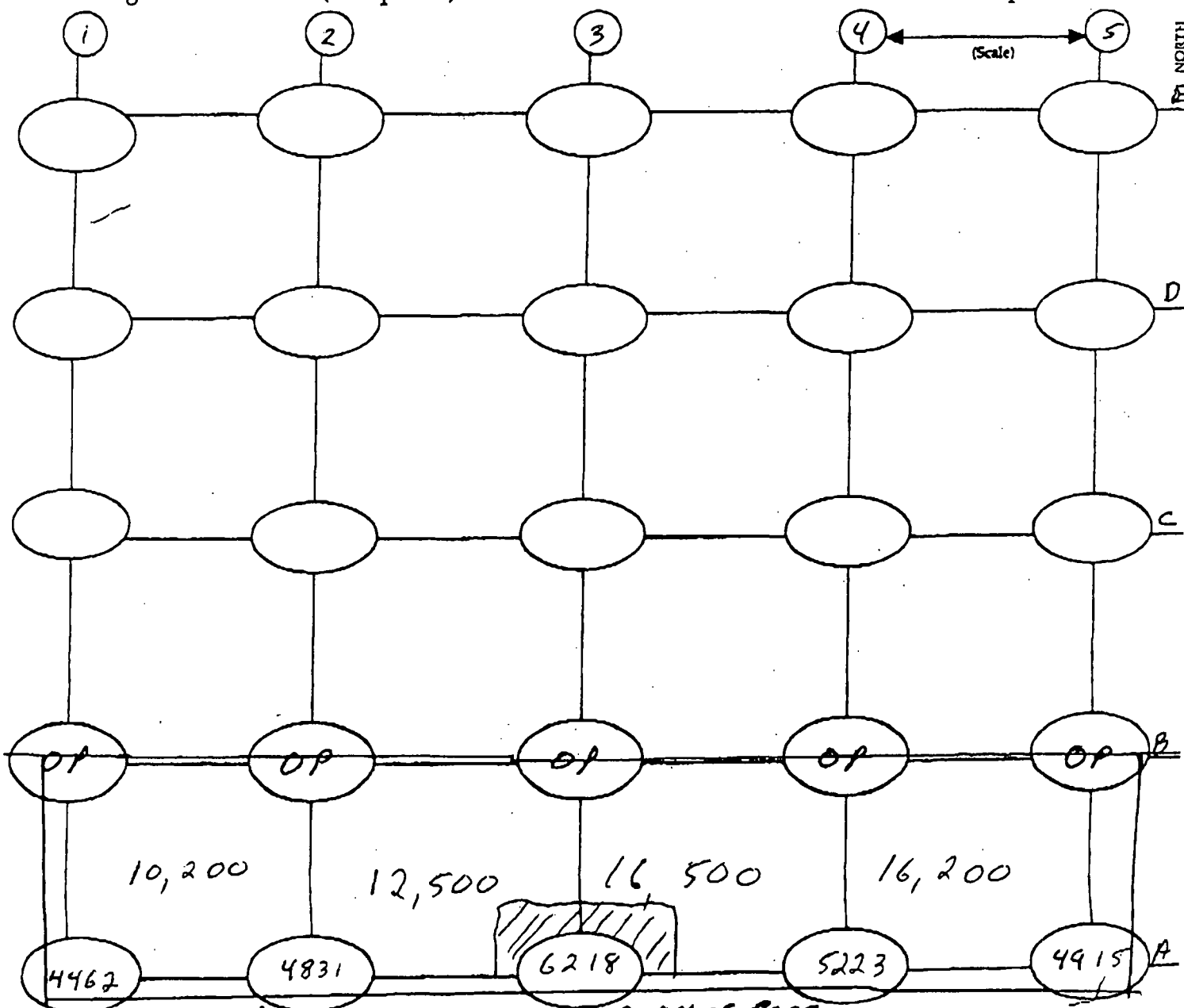
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 34-84 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
Exclusion zone boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

STC Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 2 of 26

Date 8-2-02

Technician L D L 'h

Inst. Model Ludlum 2221

Serial No. 126496 / 168113

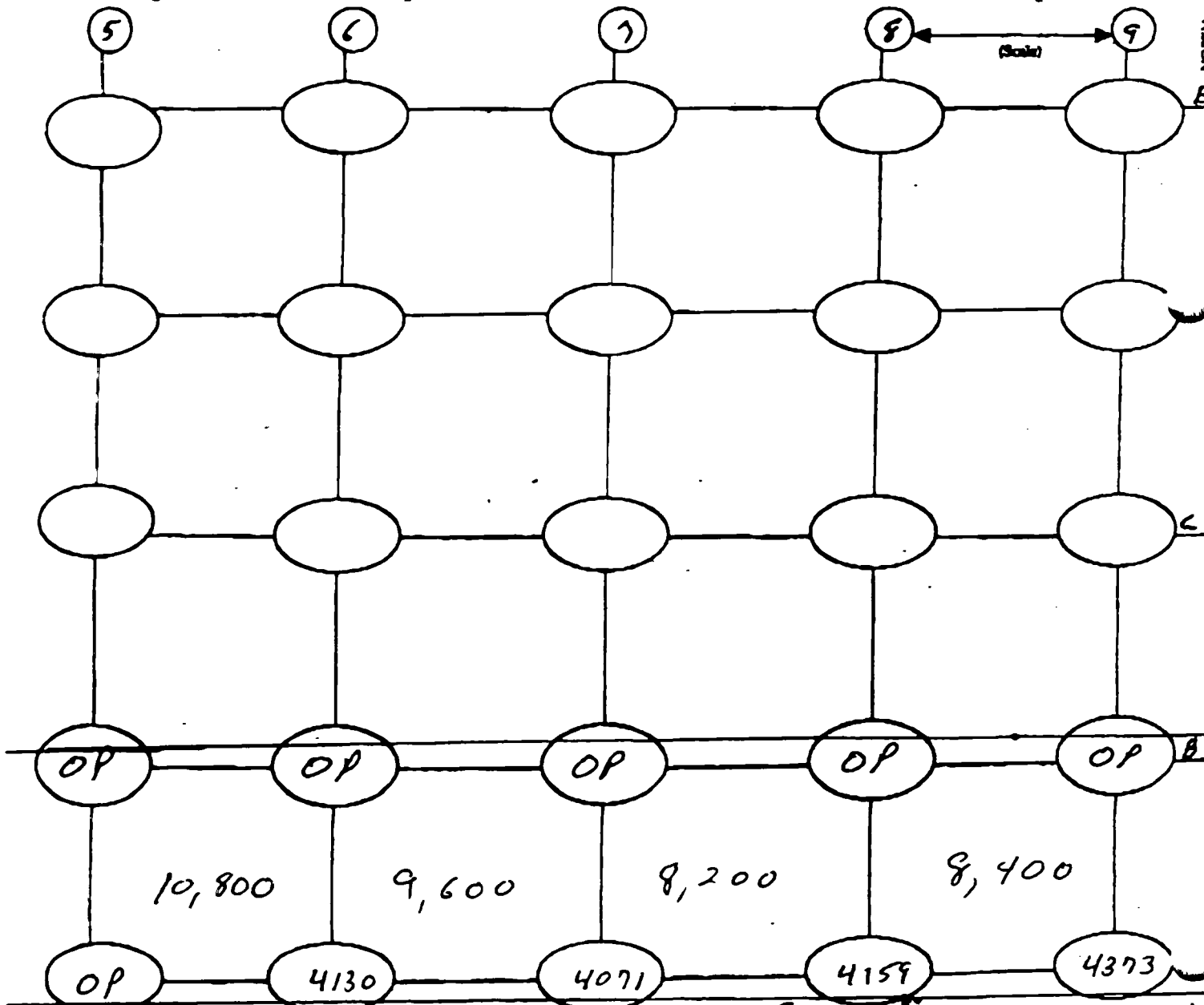
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 3k + 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
SL = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 25

STS Consultants, Ltd.

Date 8-5-09

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

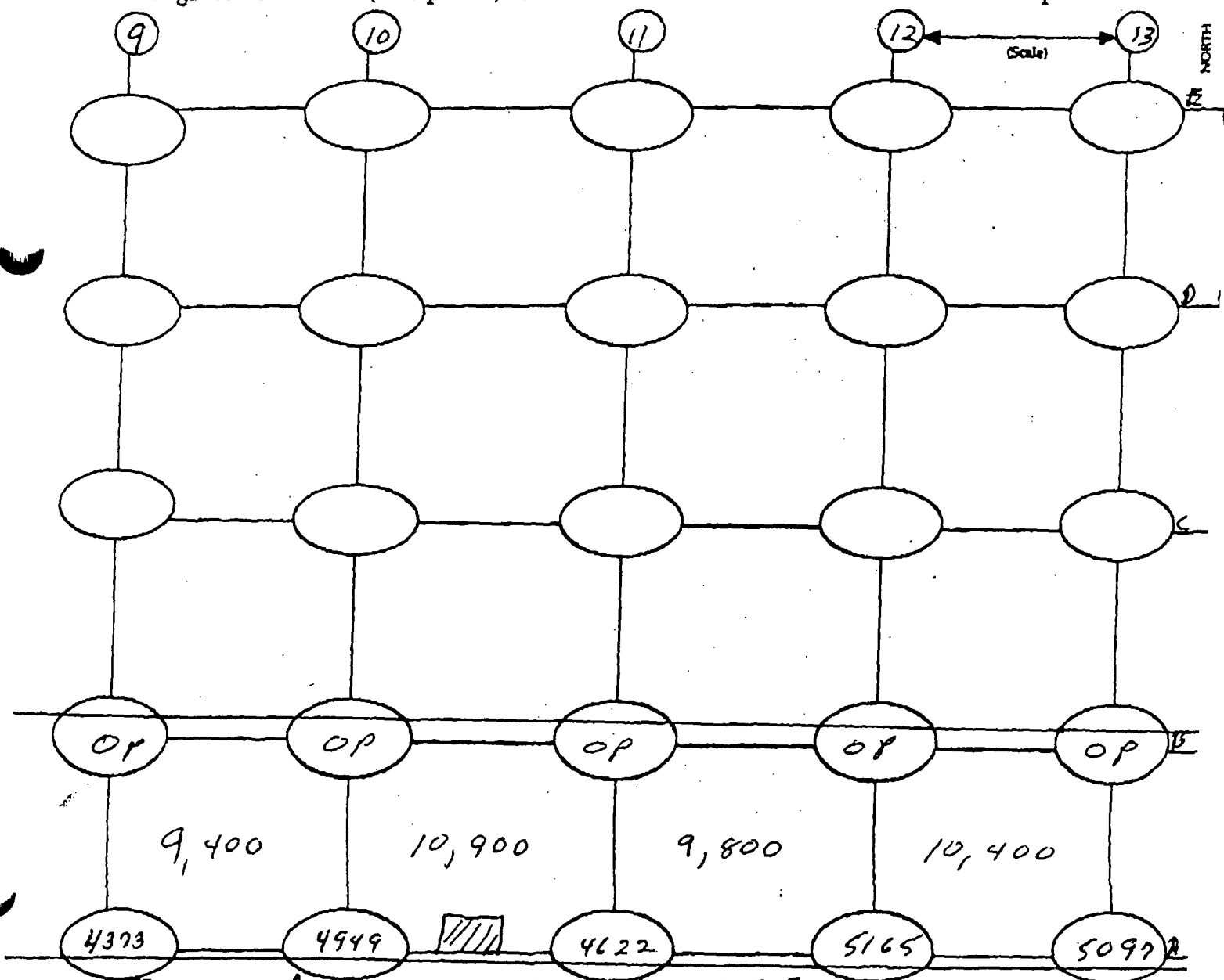
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 2k-6k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP & other pose

Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 25

STS Consultants, Ltd.

Date 8-6-02

Technician L D L - W

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

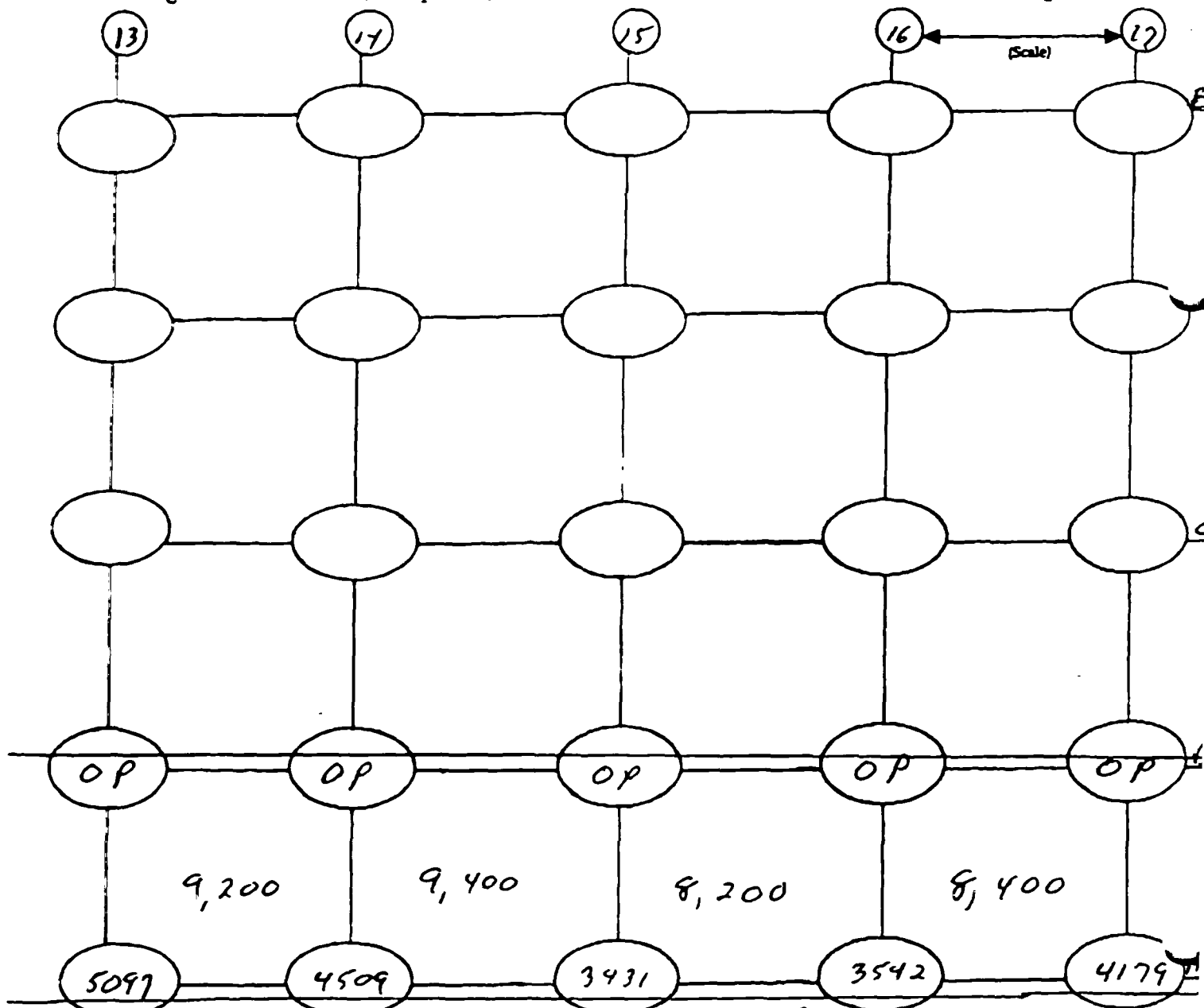
Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded ☒ Not Shielded

Lift Elevation Surface

Background 24 ± 64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143
Serial No.

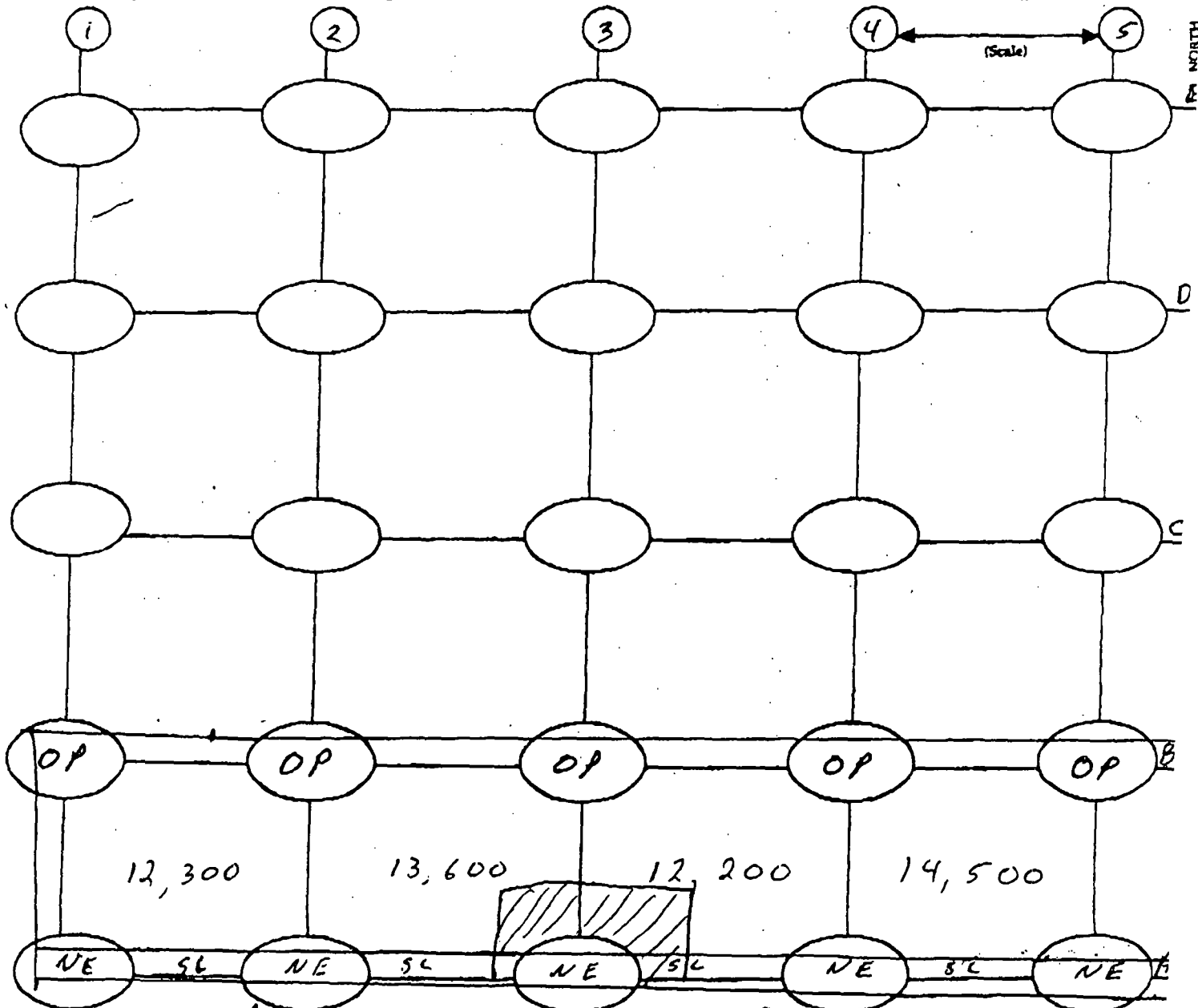
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 34-8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
* = Exclusion zone boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 6 of 25

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

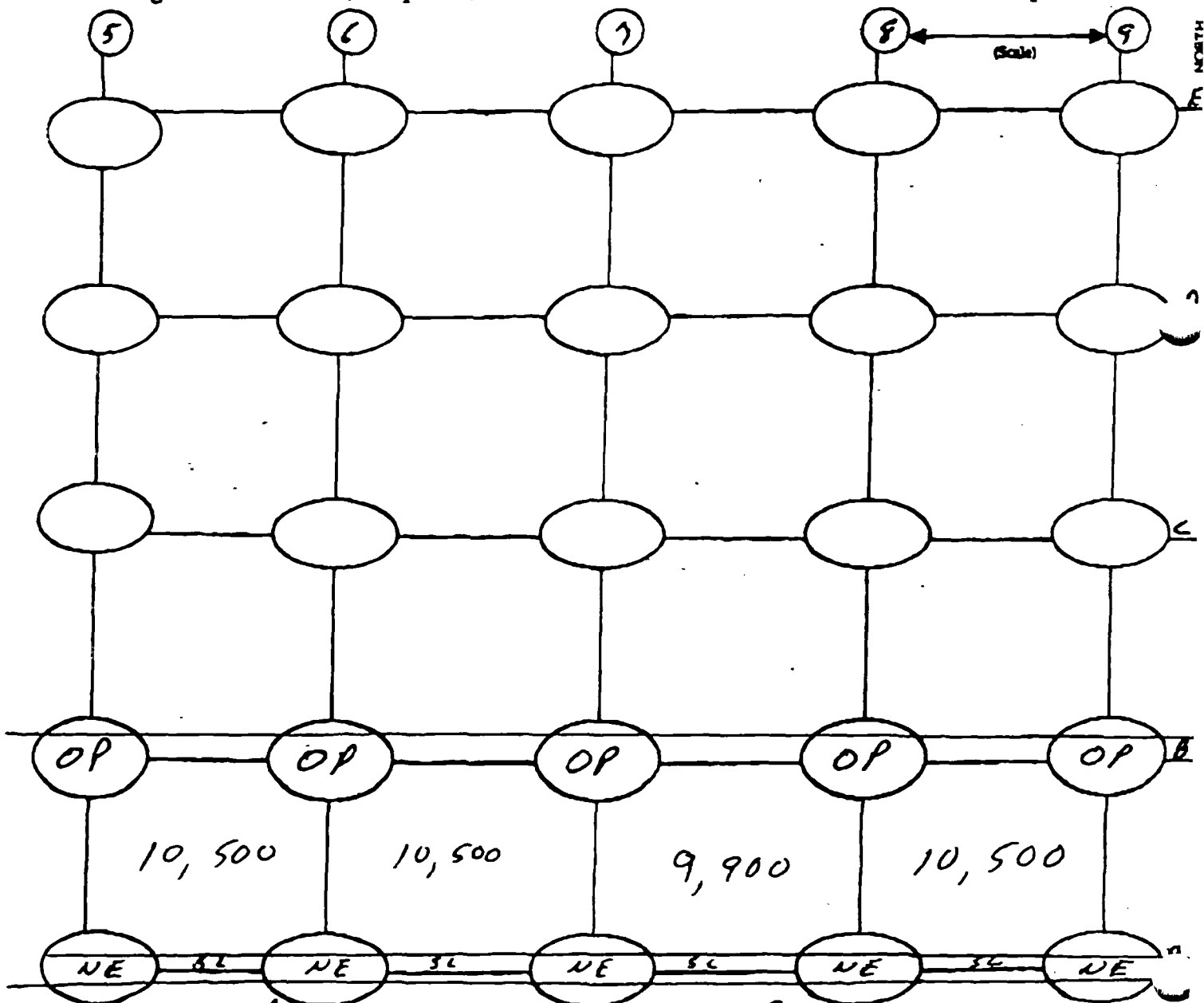
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not Shielded

Lift Elevation -1.5'

Background 3k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
☒ = Exclusion zone boundary NE = Not Excavated SL = Slope

RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 7 of 25

Date 8-5-09

Technician L O Smith

Inst. Model Ludlum 2221

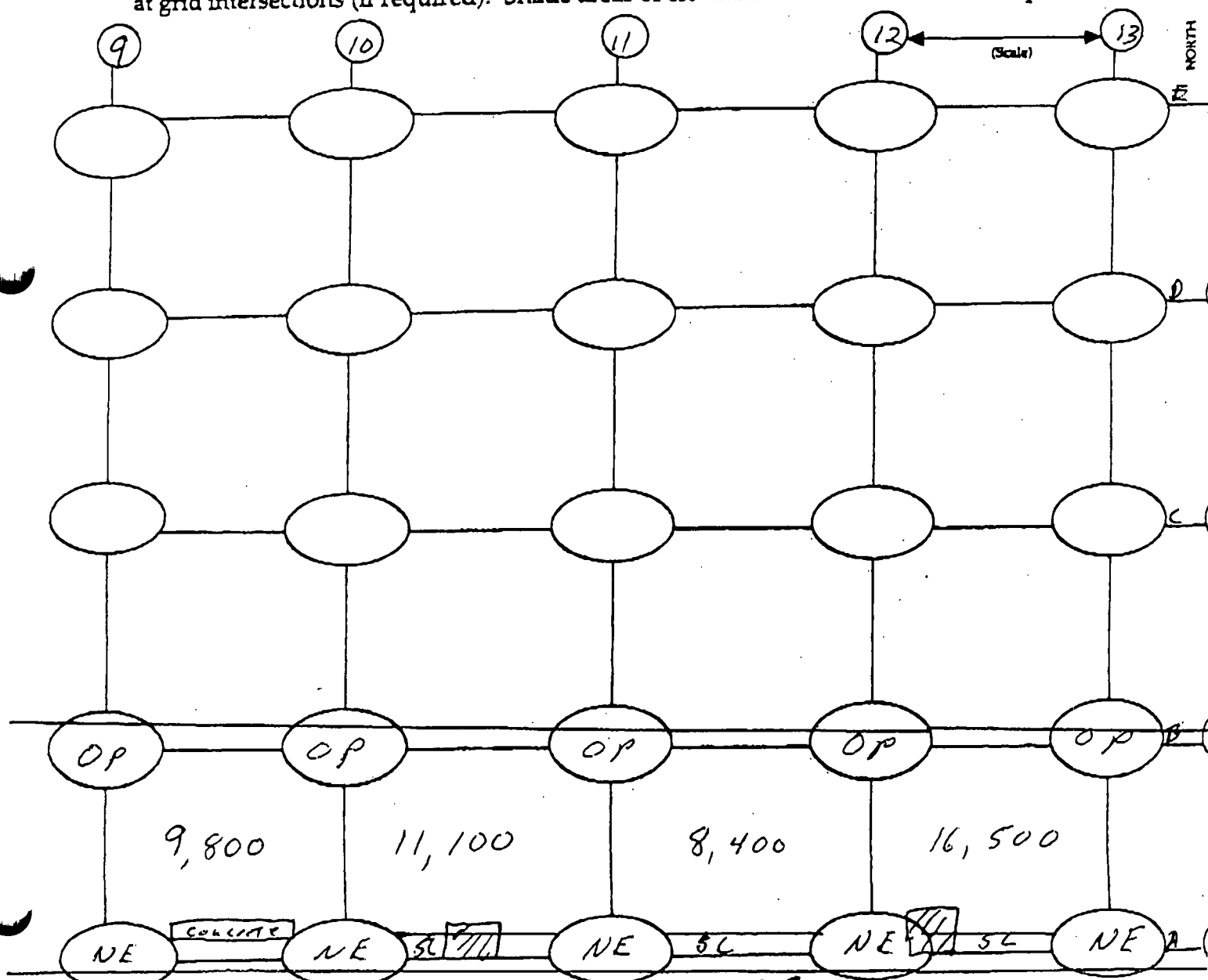
meter #	Probe #
126496	168143



Probe Type: 1'x1' NaI 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 24-64 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP=Other Page
 - Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 8 of 25

STS Consultants, Ltd.

Date 8-6-02

Technician L D L

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

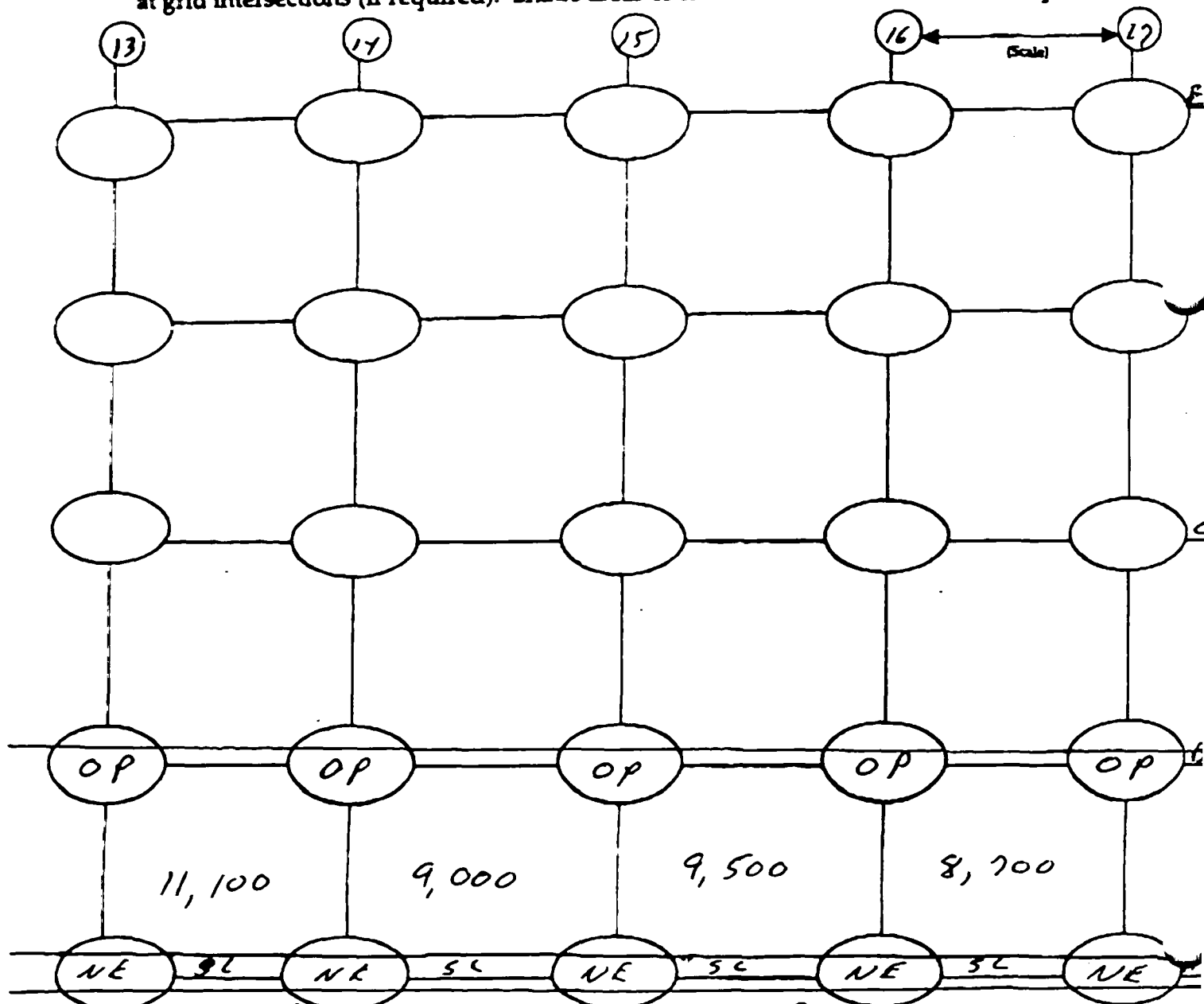
Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded ☐ Not Shielded ☒

Lift Elevation -1.5'

Background 24-64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP OMer Page
 = Exclusion zone boundary NE = Not excavated SL = Slope

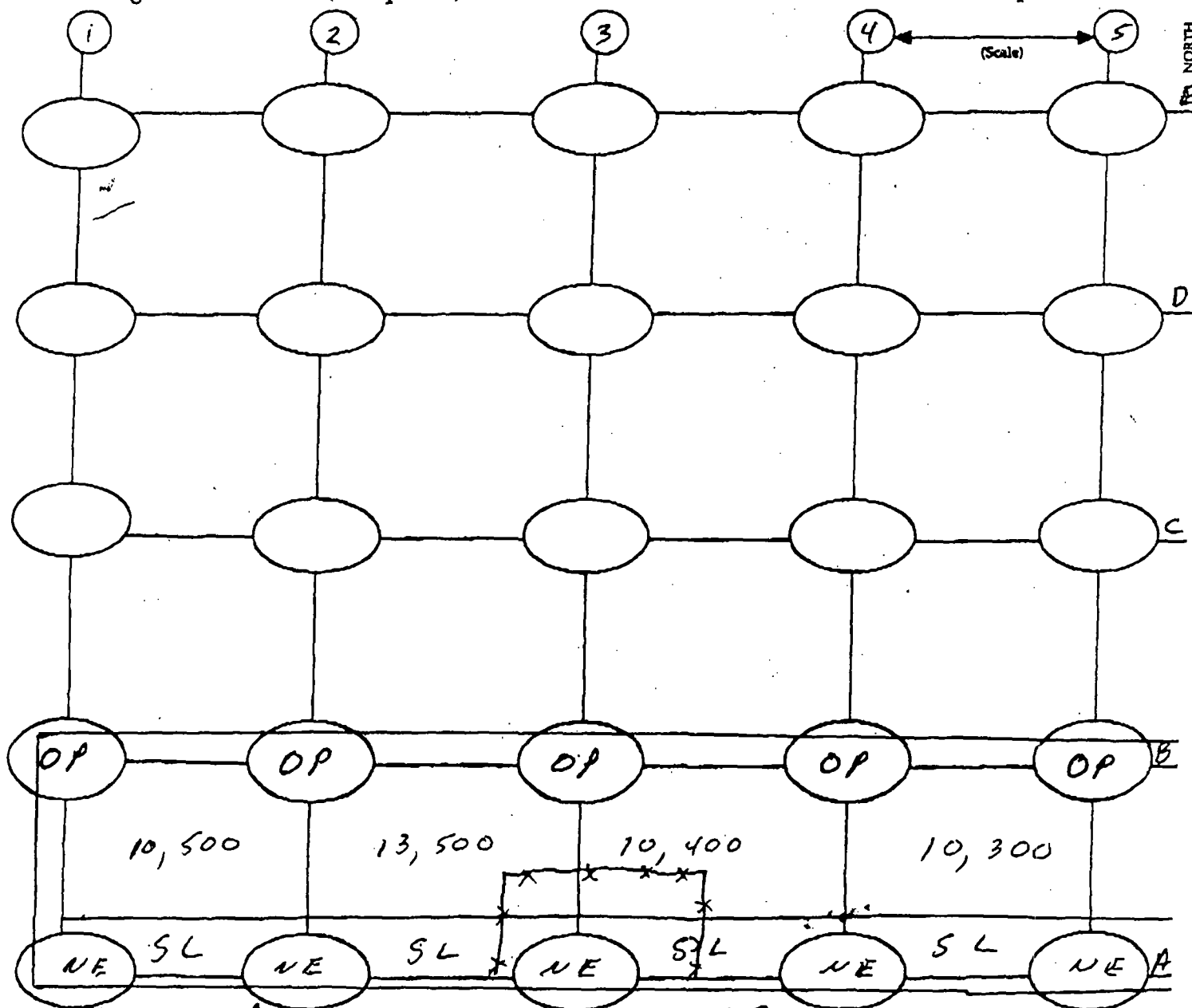


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 9 of 26Date 8-2-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143
Serial No.Probe Type: 1"x1" Nal 2"x2" Nal
Shielded Not ShieldedLift Elevation -3'Background 34-84 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
X = Exclusion zone boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 10 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

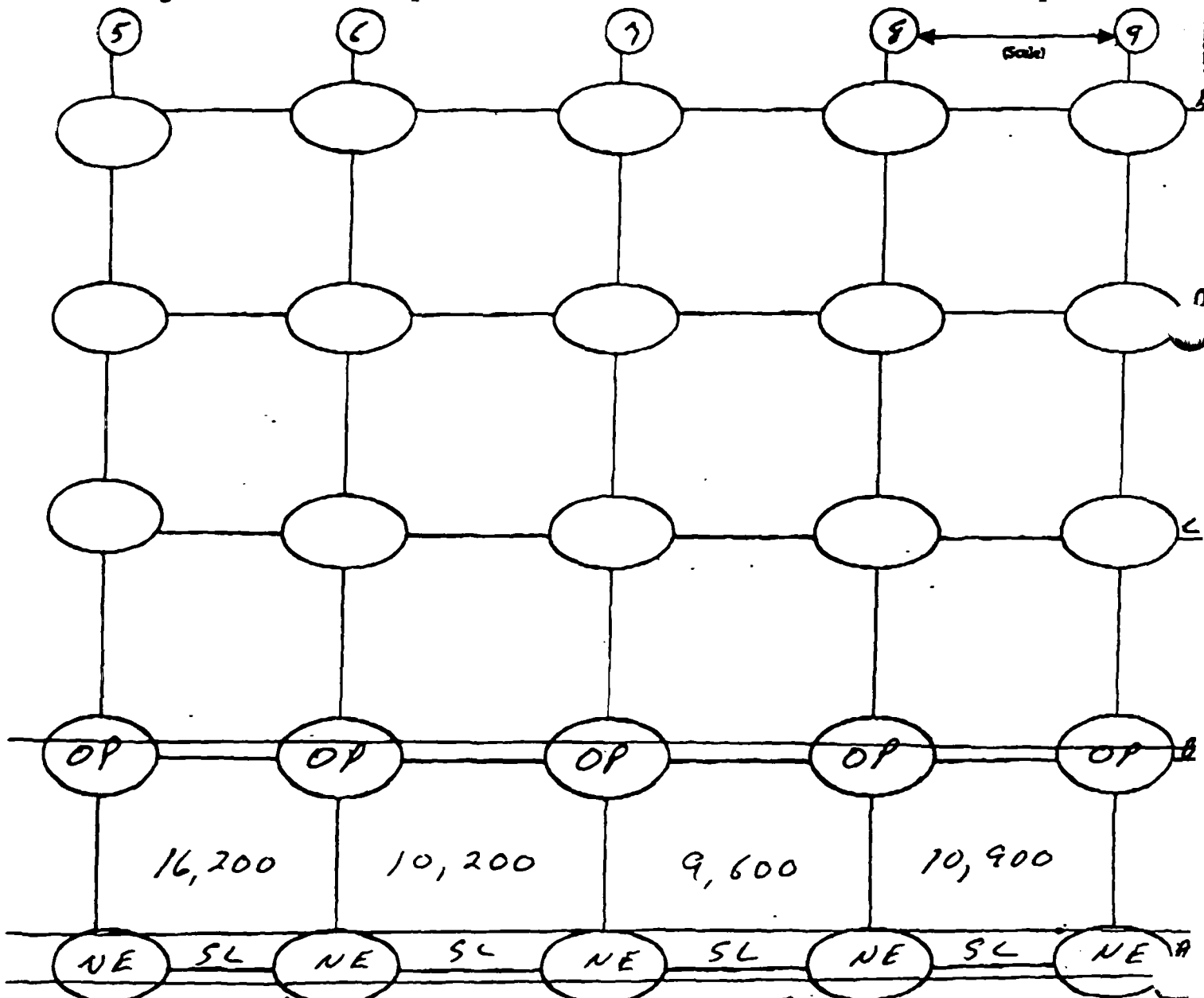
meter # 126496 Probe # 168113

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 3A-8A cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary NE = Not Excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 11 of 25

Date 8-5-09

Technician L D Smith

Inst. Model Ludlum 2221

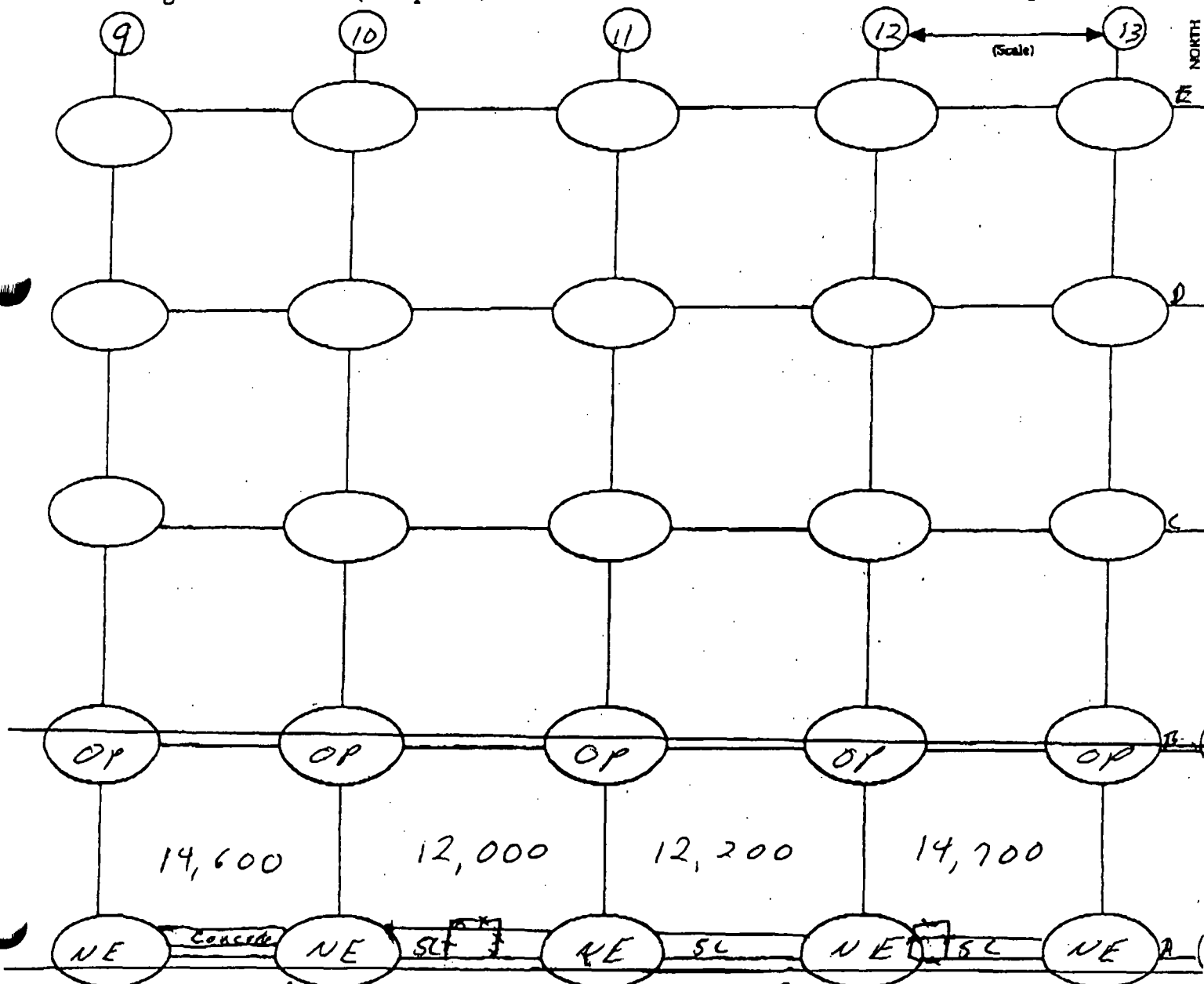
meter # 126496 Probe # 168143

Probe Type: 1'x1" NaI 2"x2" NaI
Shielded Not Shielded

Lift Elevation - 3'

Background 24-64 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 12 of 25

STS Consultants, Ltd.

Date 8-6-02

Technician L D L W

Inst. Model Ludlum 2221

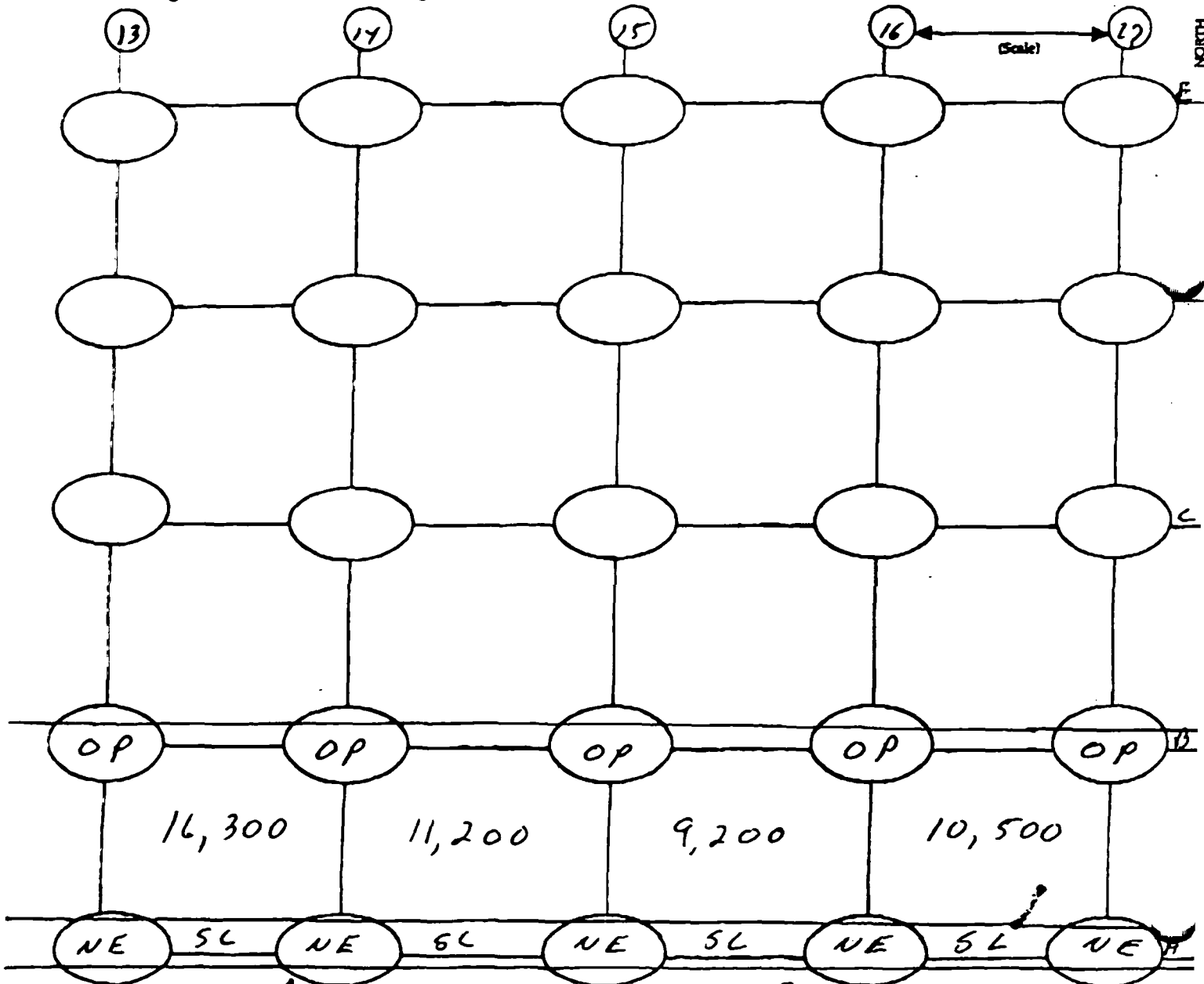
Serial No. 126496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 24-64 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 13 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

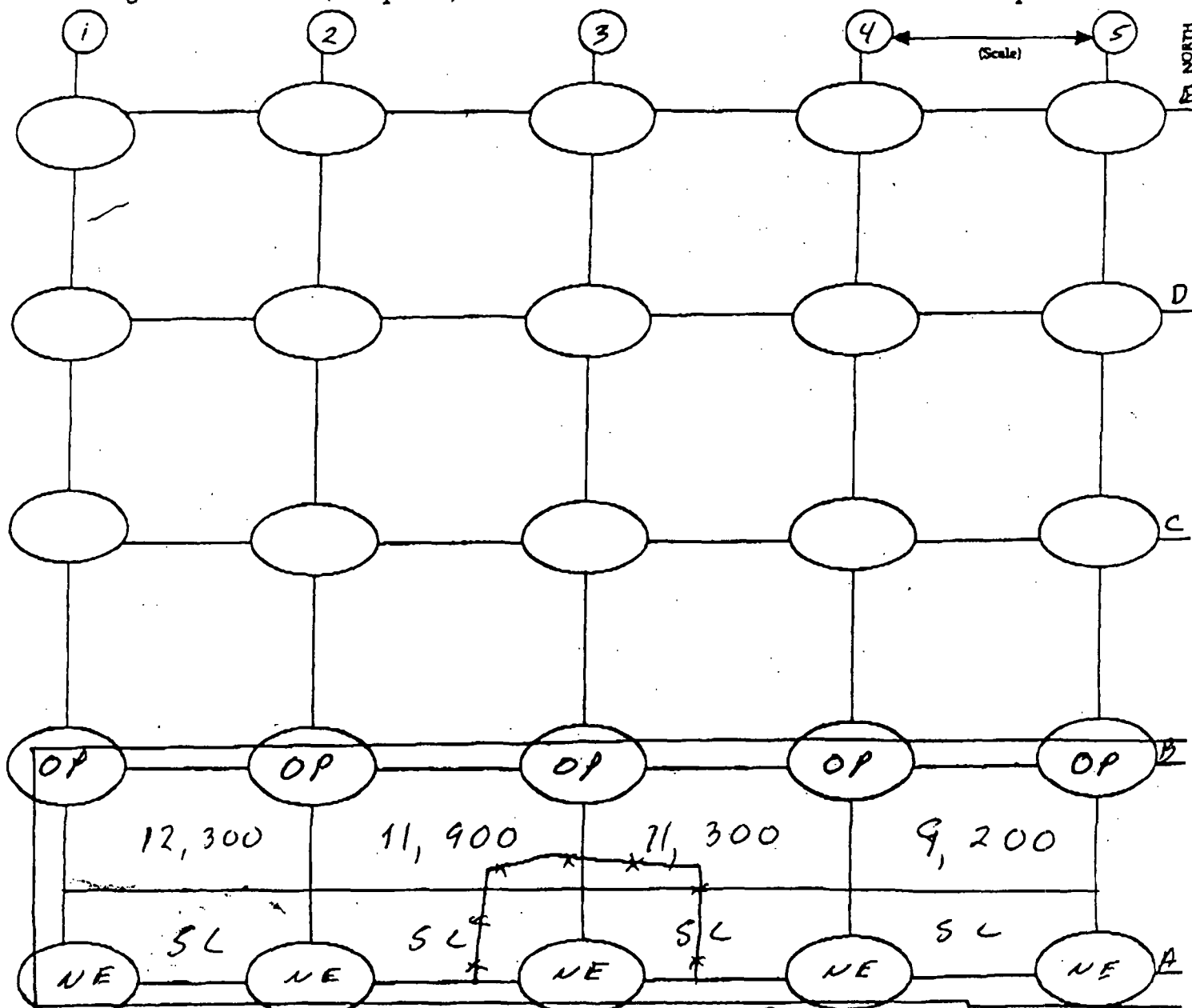
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not Shielded

Lift Elevation -4.5'

Background 3k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 14 of 25

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

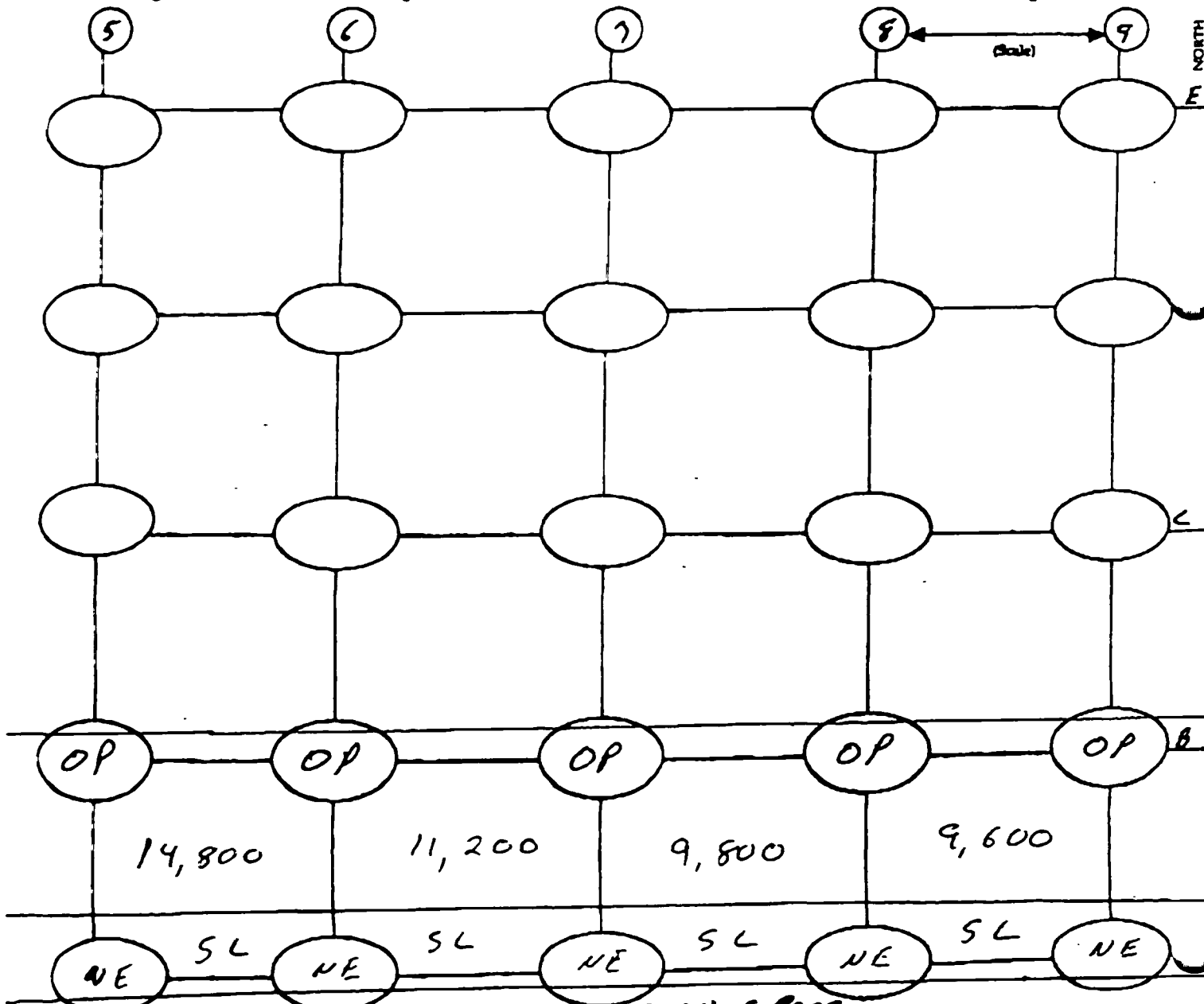
Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 15 of 25

STS Consultants, Ltd.

Date 8-5-09

Technician L D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 168143

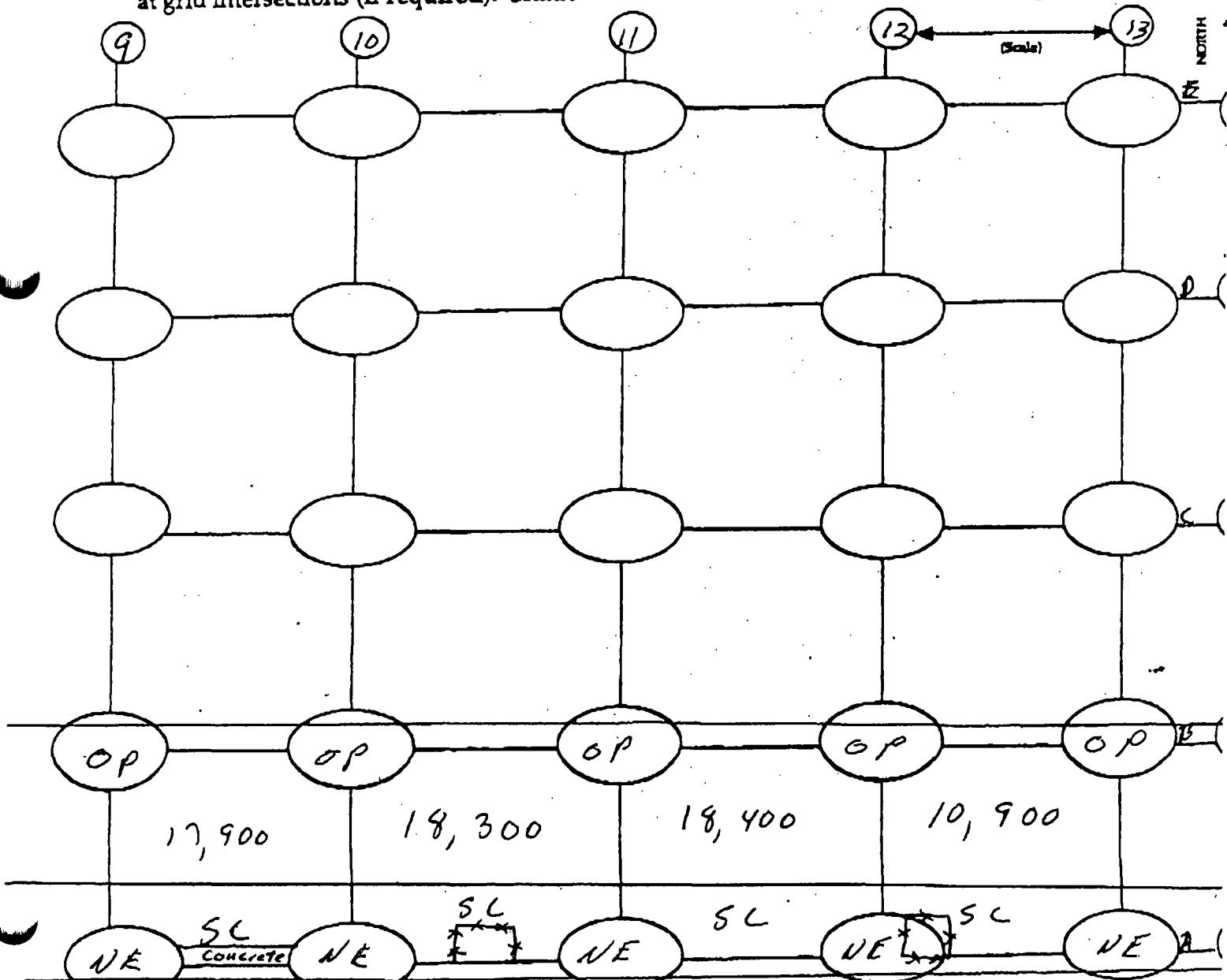
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 24-64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
*** - Exclusion zone boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 16 of 25

STS Consultants, Ltd.

Date 8-6-02

Technician LD L. W.

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

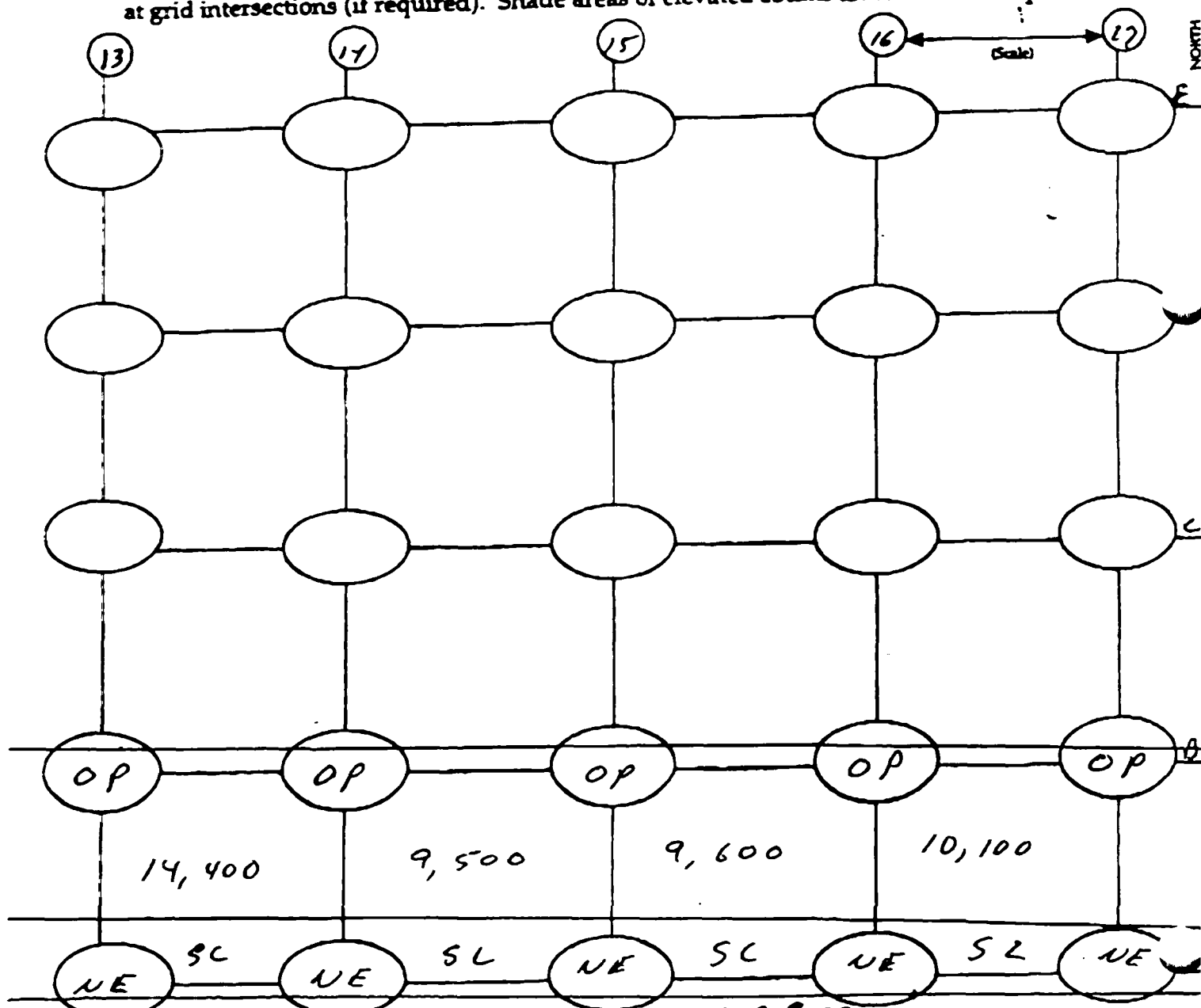
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded ☒ Not Shielded

Lift Elevation -4.5'

Background 24 ± 64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
* = Exclusion zone boundary NE = Not Excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 17 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician 2 D Smith

Inst. Model Ludlum 2221

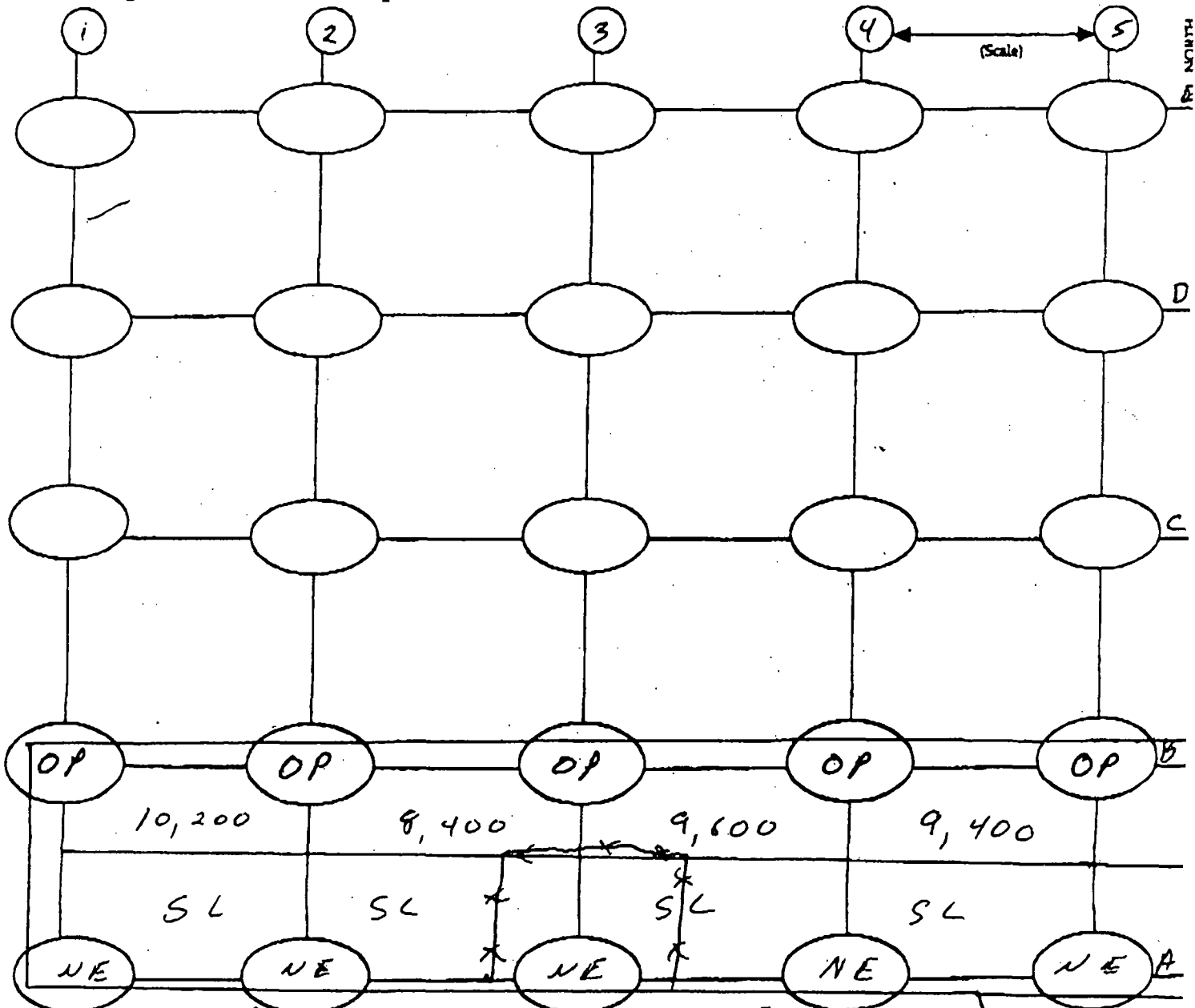
Serial No. 126496 / 168143

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 34-84 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
* = Exclusion zone boundary NE=NOT Excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 18 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 168193

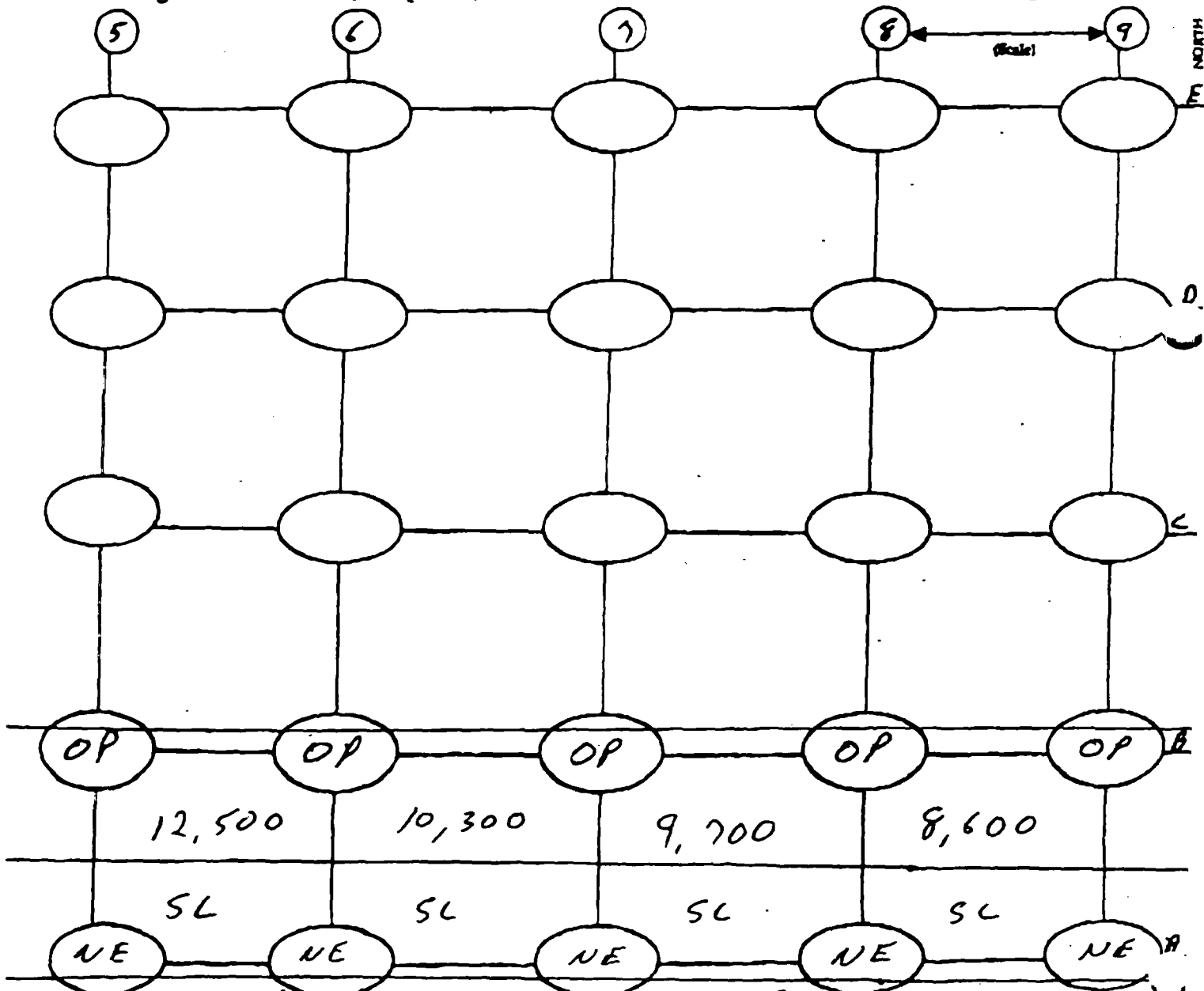
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not Shielded

Lift Elevation -6'

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary NE = Not Excavated



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 19 of 25

Date 8-5-09

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

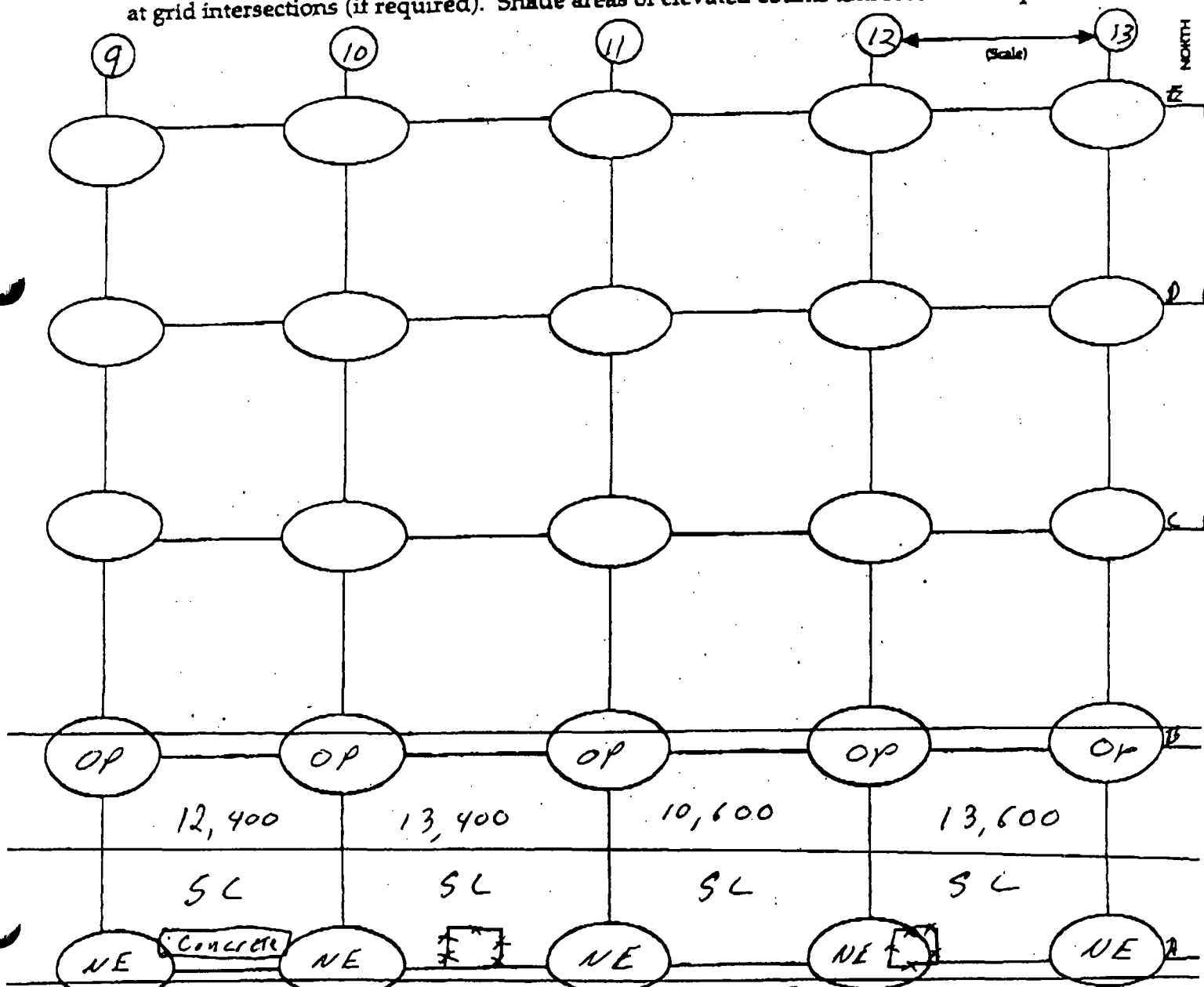
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 24-64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
--- Exclusion zone boundary NE = Not Encountered SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 20 of ?

STS Consultants, Ltd.

Date 8-6-02

Technician L D L

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

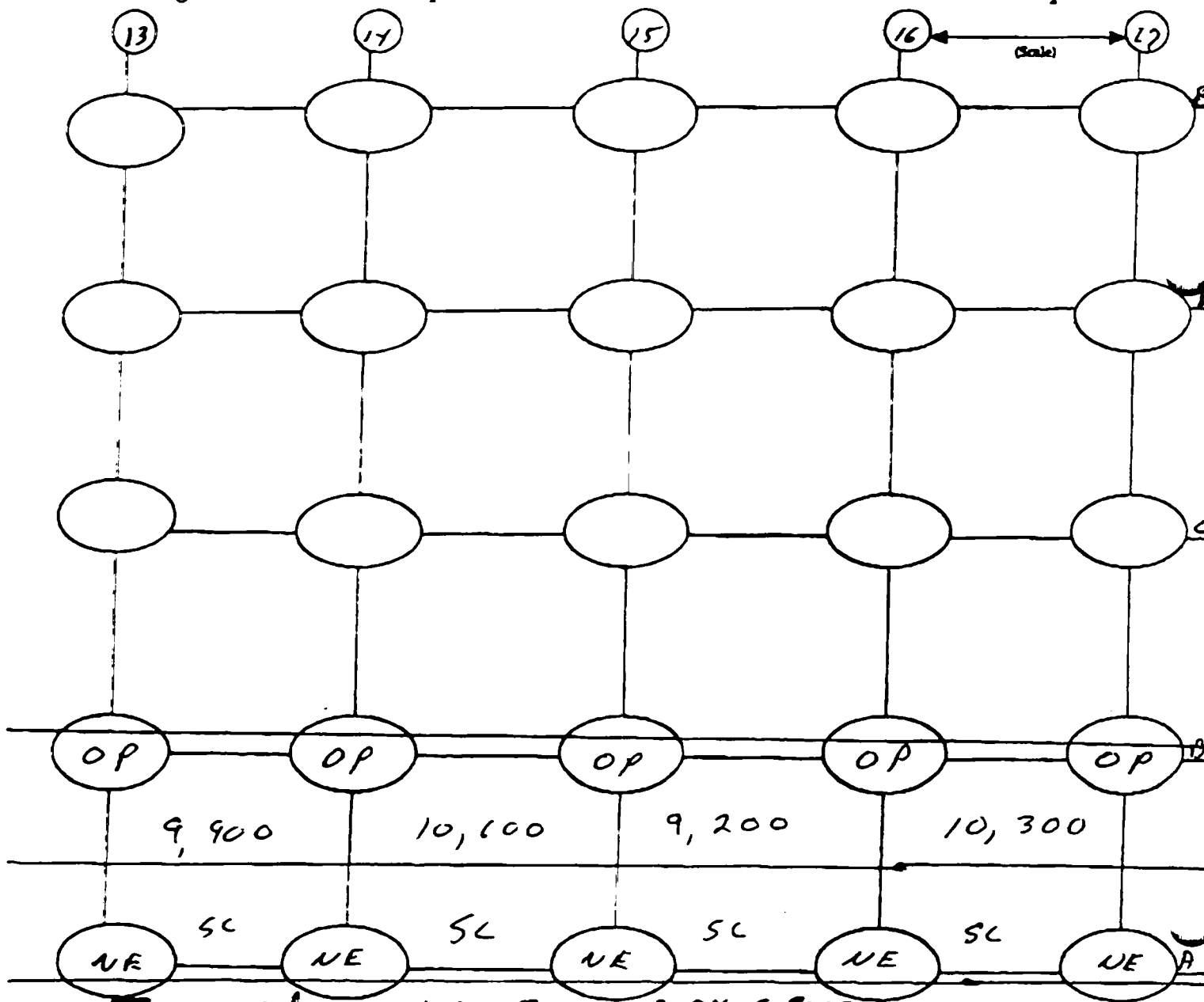
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 6'

Background 24 - 64 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 21 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

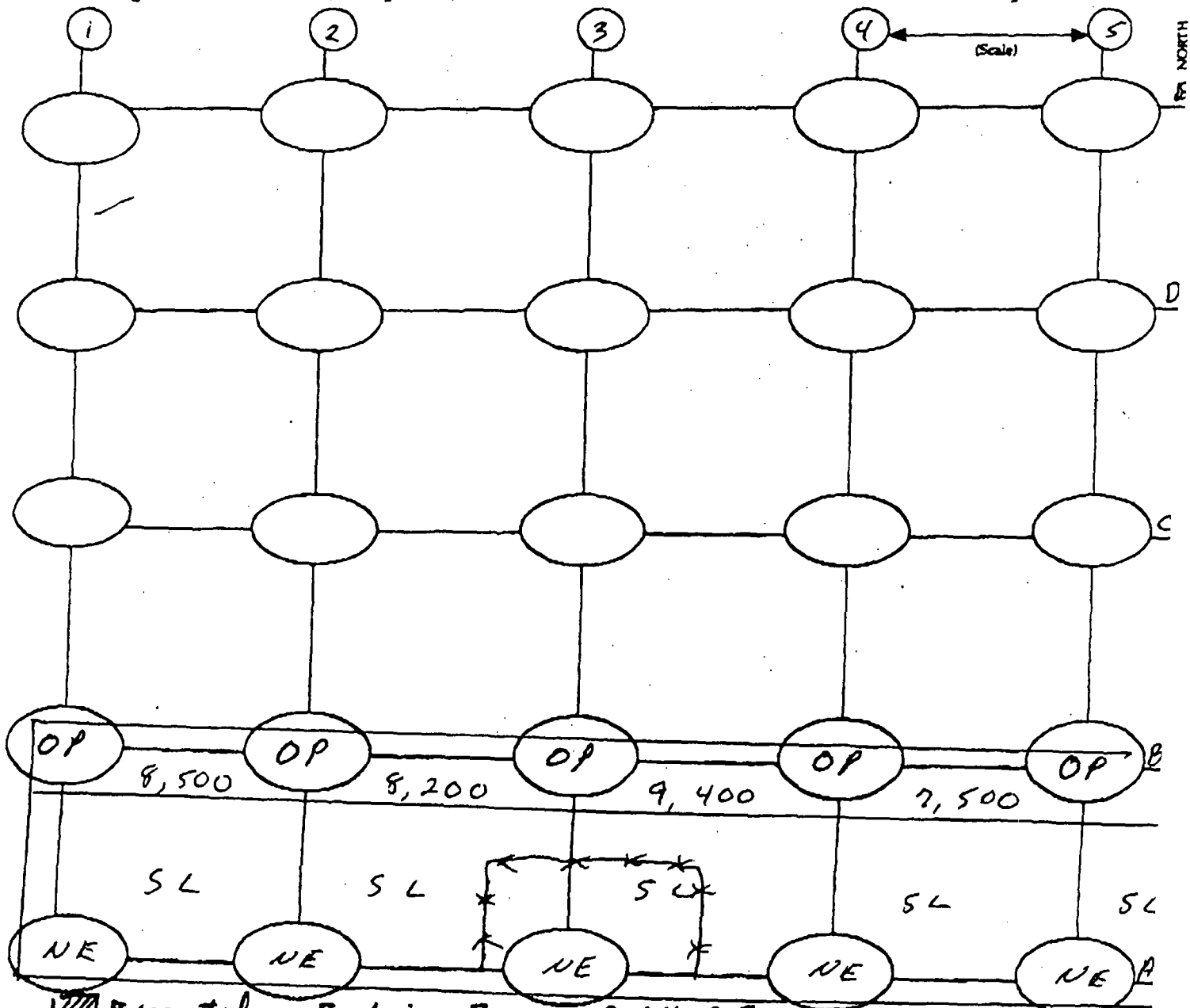
meter # 126496 Probe # 168143

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation - 7.5'

Background 34-84 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Occupational Protection
 = Exclusion zone boundary NE=NOT Excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 22 of 25

STS Consultants, Ltd.

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168193

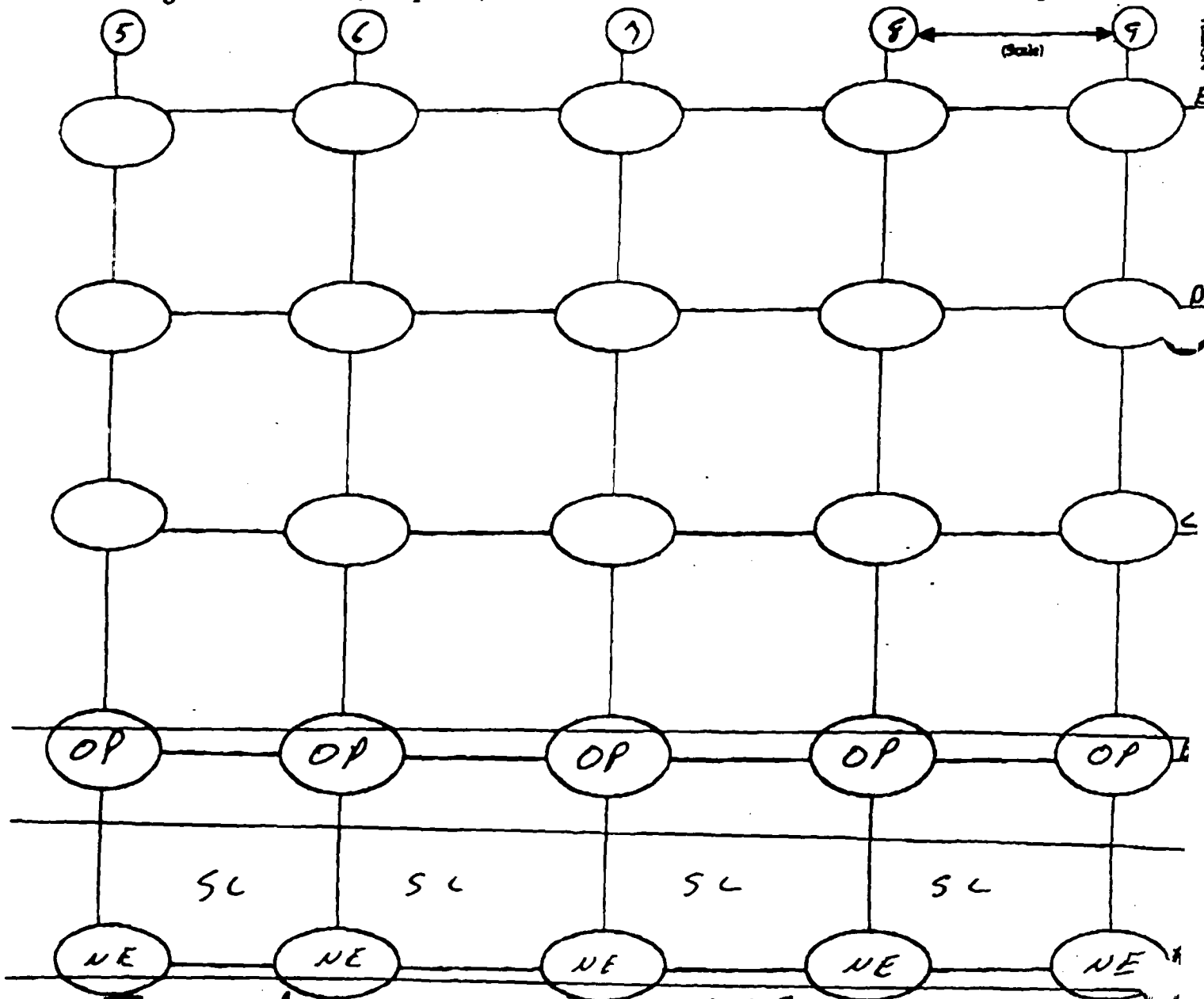
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded ☒ Not Shielded

Lift Elevation -7.5'

Background 3A + 8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page

☒ = Exclusion zone boundary NE = Not Excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 23 of 25

Date 8-5-09

Technician L O Smith

Inst. Model Ludlum 2221

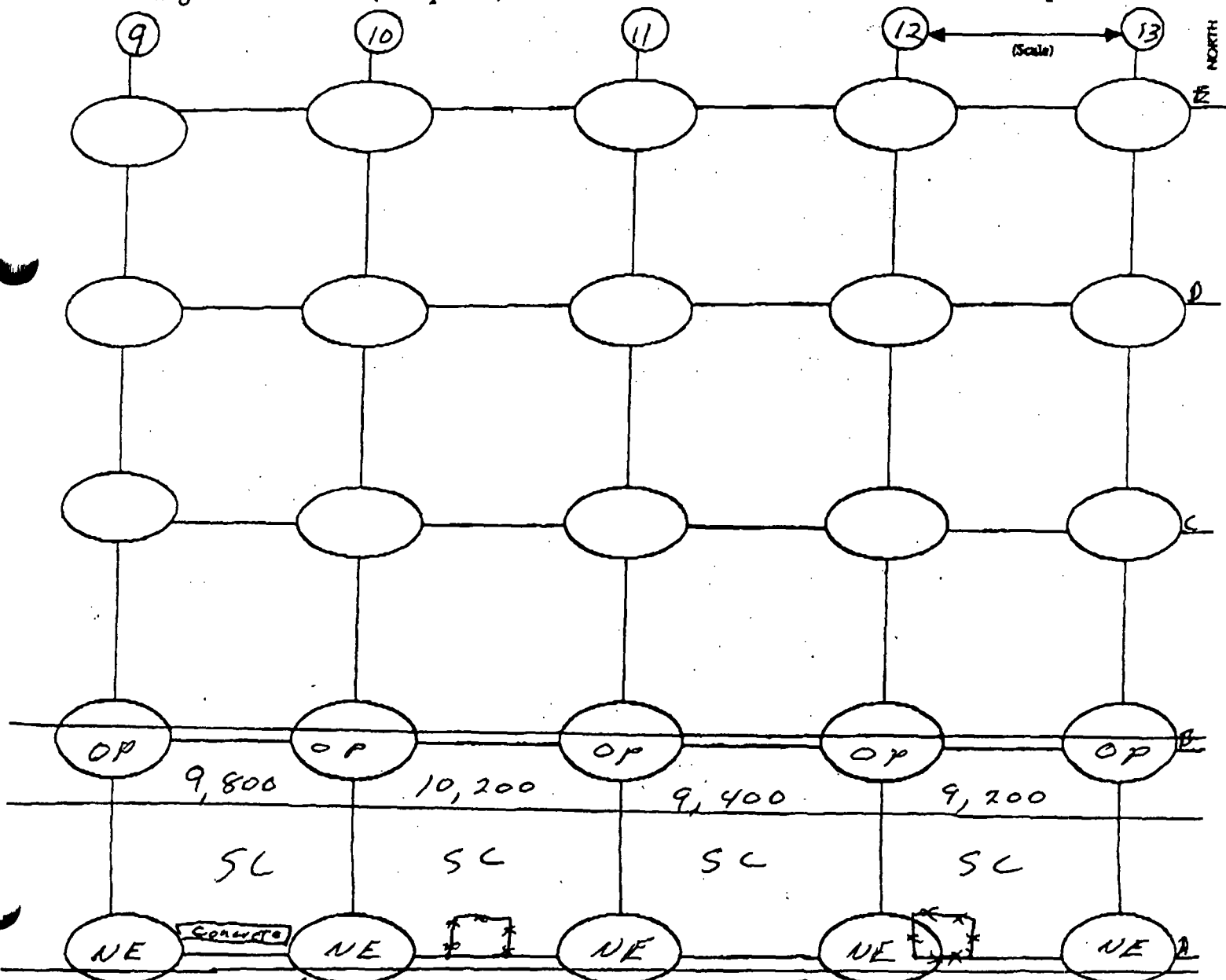
meter # 126496 Probe # 168143

Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 24-64 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary NE = Not excavated SC = Slope



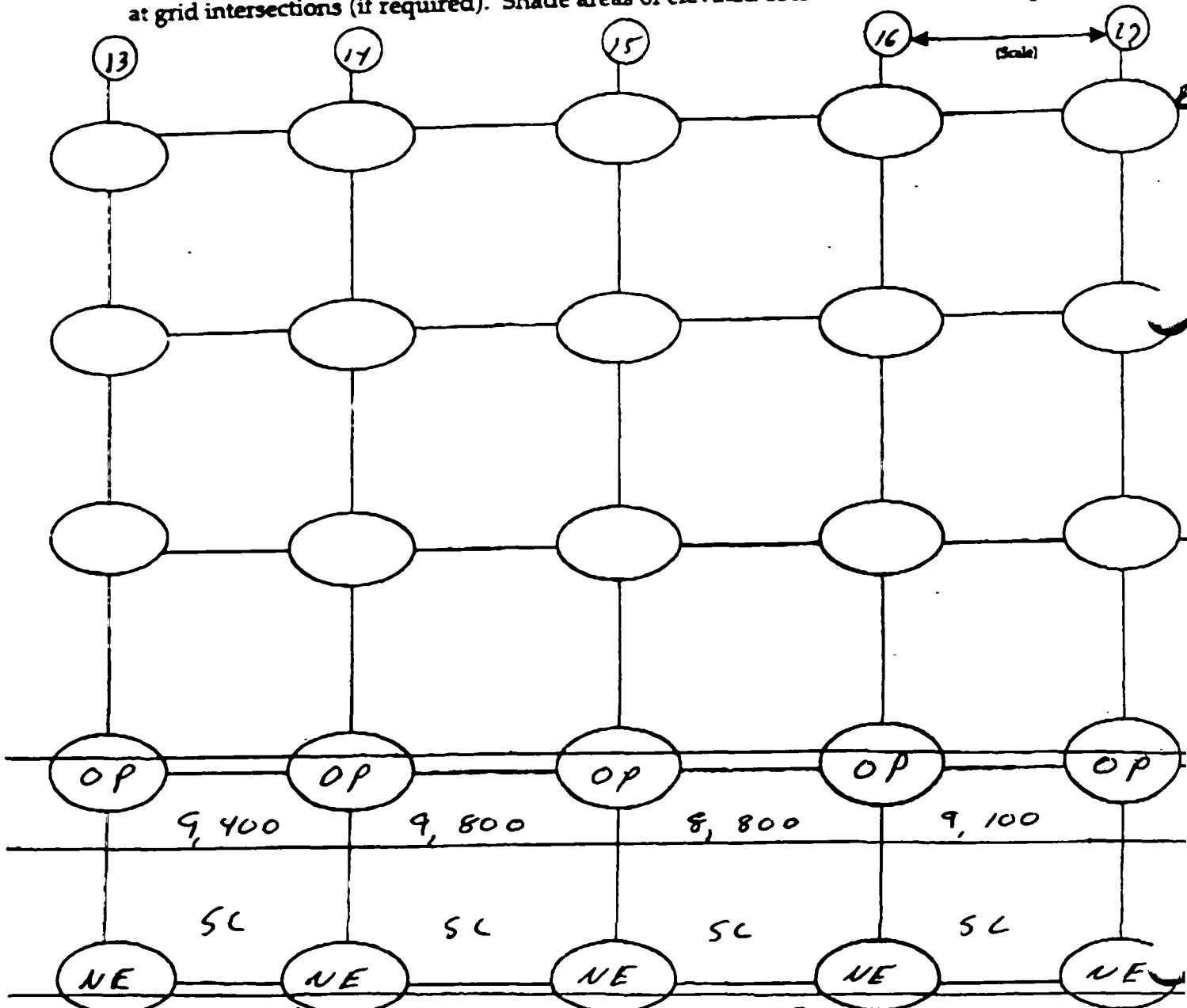
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 24 of 25

STS Consultants, Ltd.

Date 8-6-02Technician L D LInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 24 + 64 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second count at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Outer Edge
* = Exclusion zone boundary NE = Not excavated SL = Slope

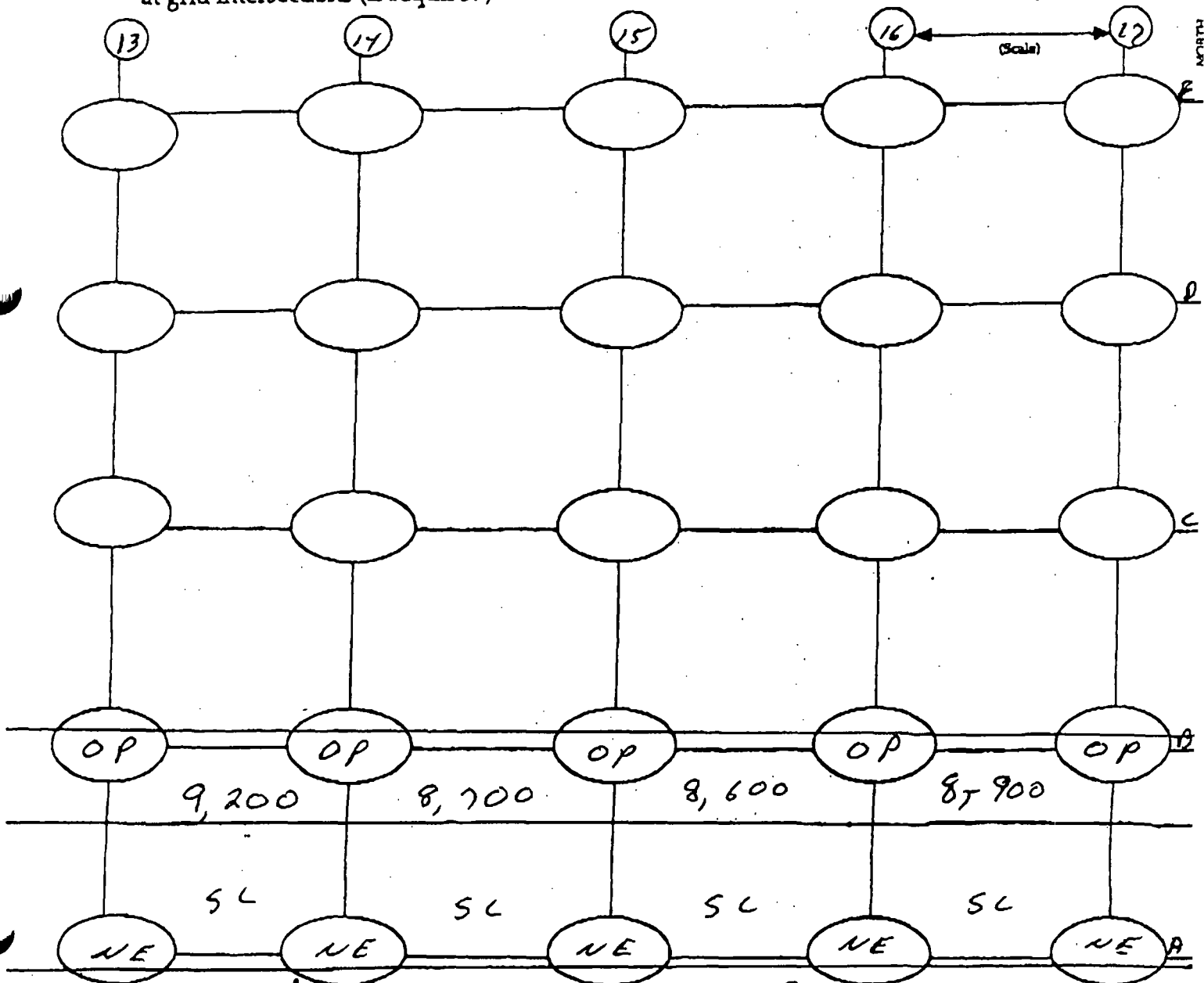


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 25 of 25Date 8-6-02Technician L D LInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not ShieldedLift Elevation - 8.5'Background 24 ± 6 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 1 of 2

Date 8-7-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

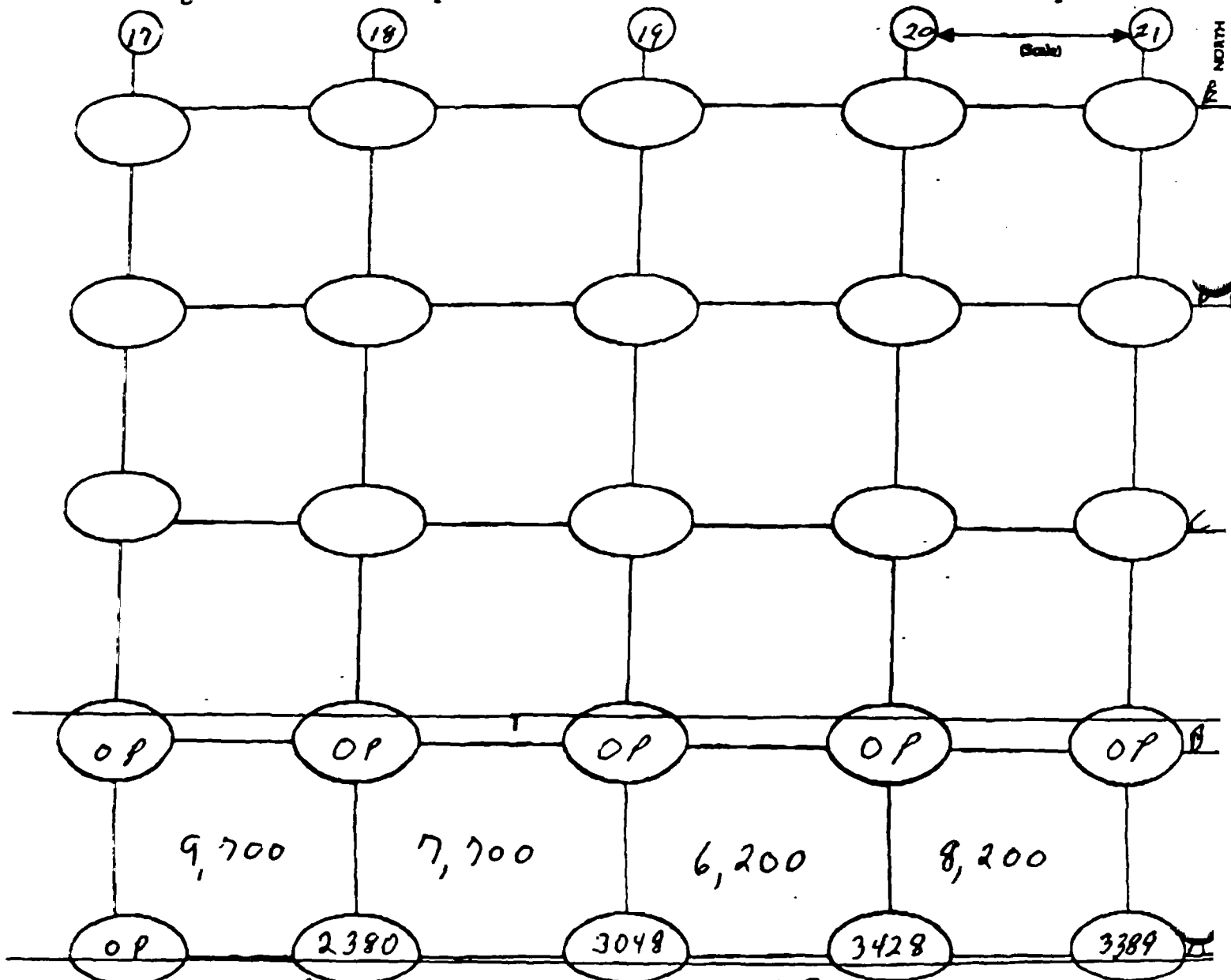
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP Other Area
Exclusion zone boundary NE = Not excavated SL = Slope

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 7

STS Consultants, Ltd.

Date _____

8-7-02

Technician

LD Link

Inst. Model

Ludlum 2221

Serial No.

meter #	Probe #
125496	168143

Probe Type:

1'x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation

-1-5'

Background

$$34 - 24$$

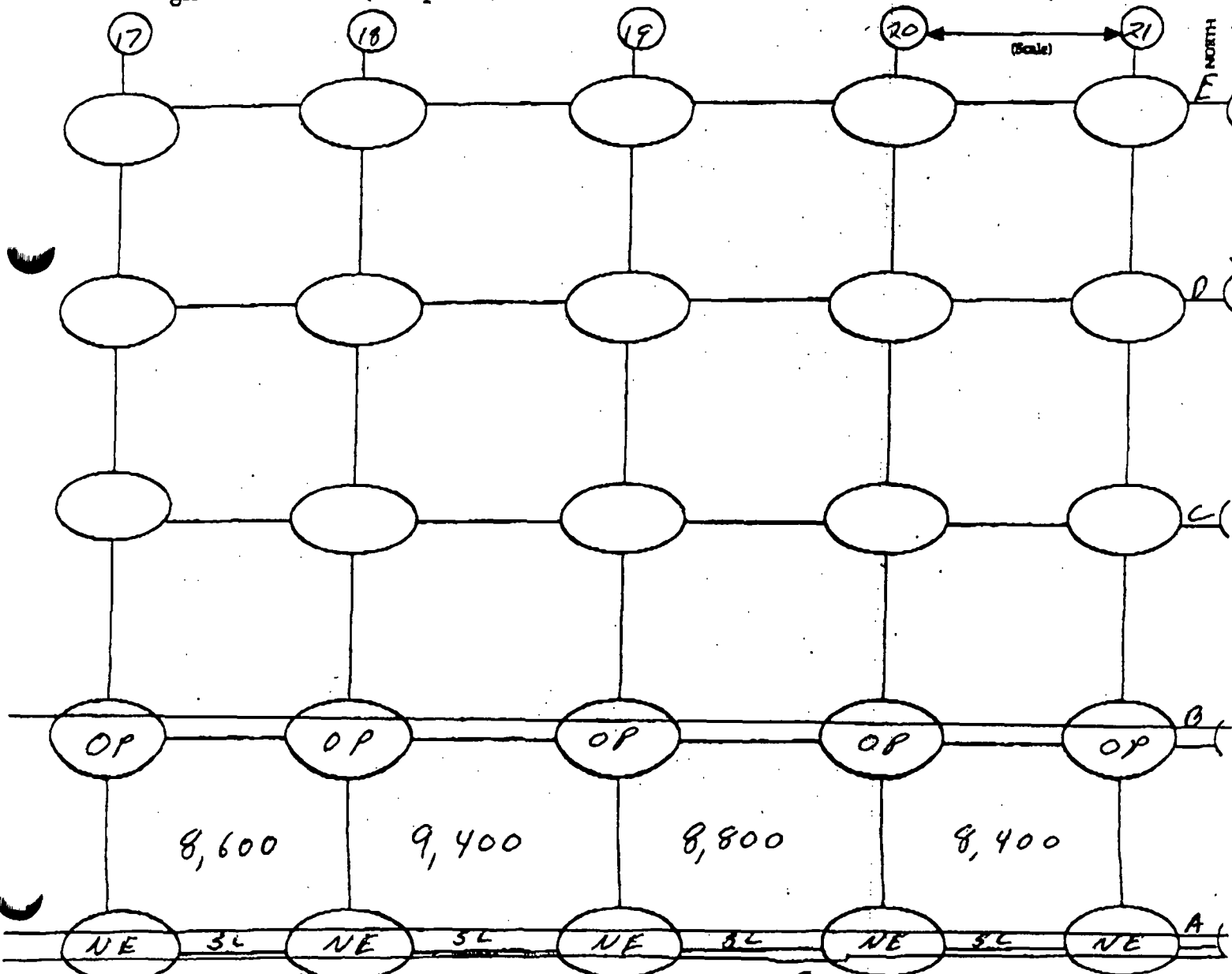
CPM

Action Level

20,680

срп

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Omar Page
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 3 of 7

Date 8-7-02

Technician J D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

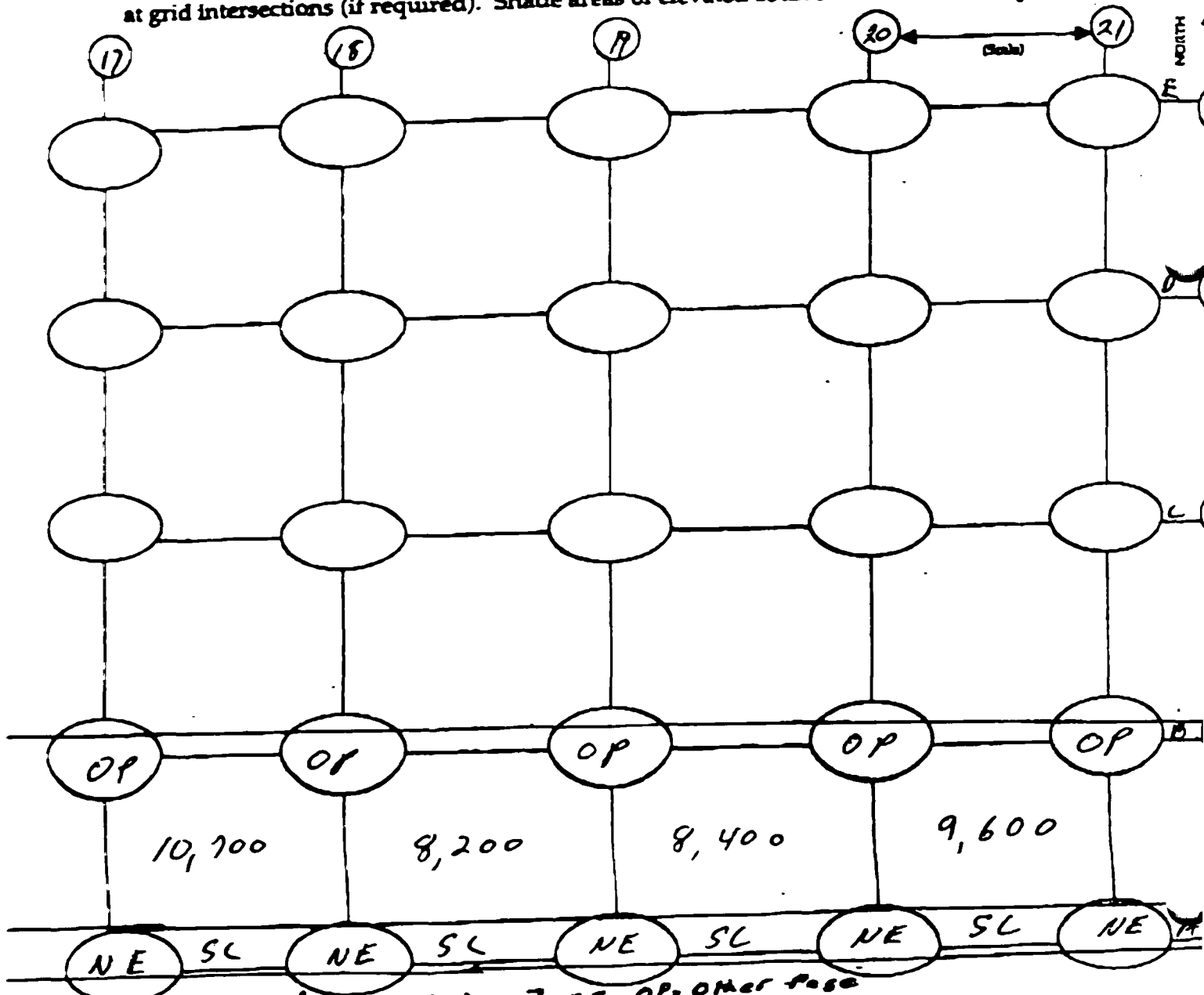
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 3h - 7h cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 4 of 7

Date 8-2-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126996 Probe # 168143

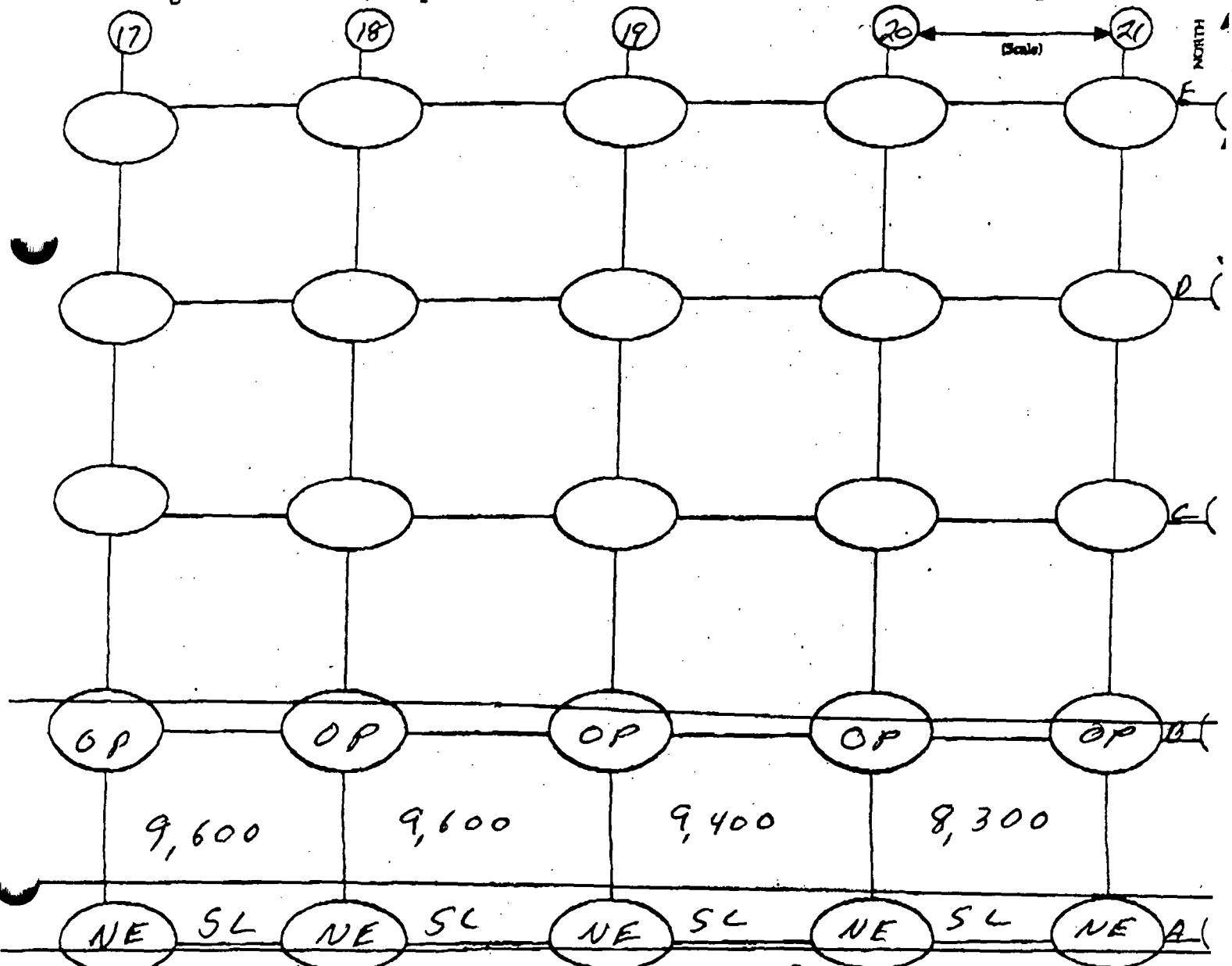
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 3K + 7K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: other page
Exclusion zone boundary NE = Not excavated SL = Slope

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 5 of 7

STC Consultants, Ltd.

Date 8-7-02

Technician L D Smith

Inst. Model Lydium 2221

meter #	Probe #
Serial No. 126496	168143

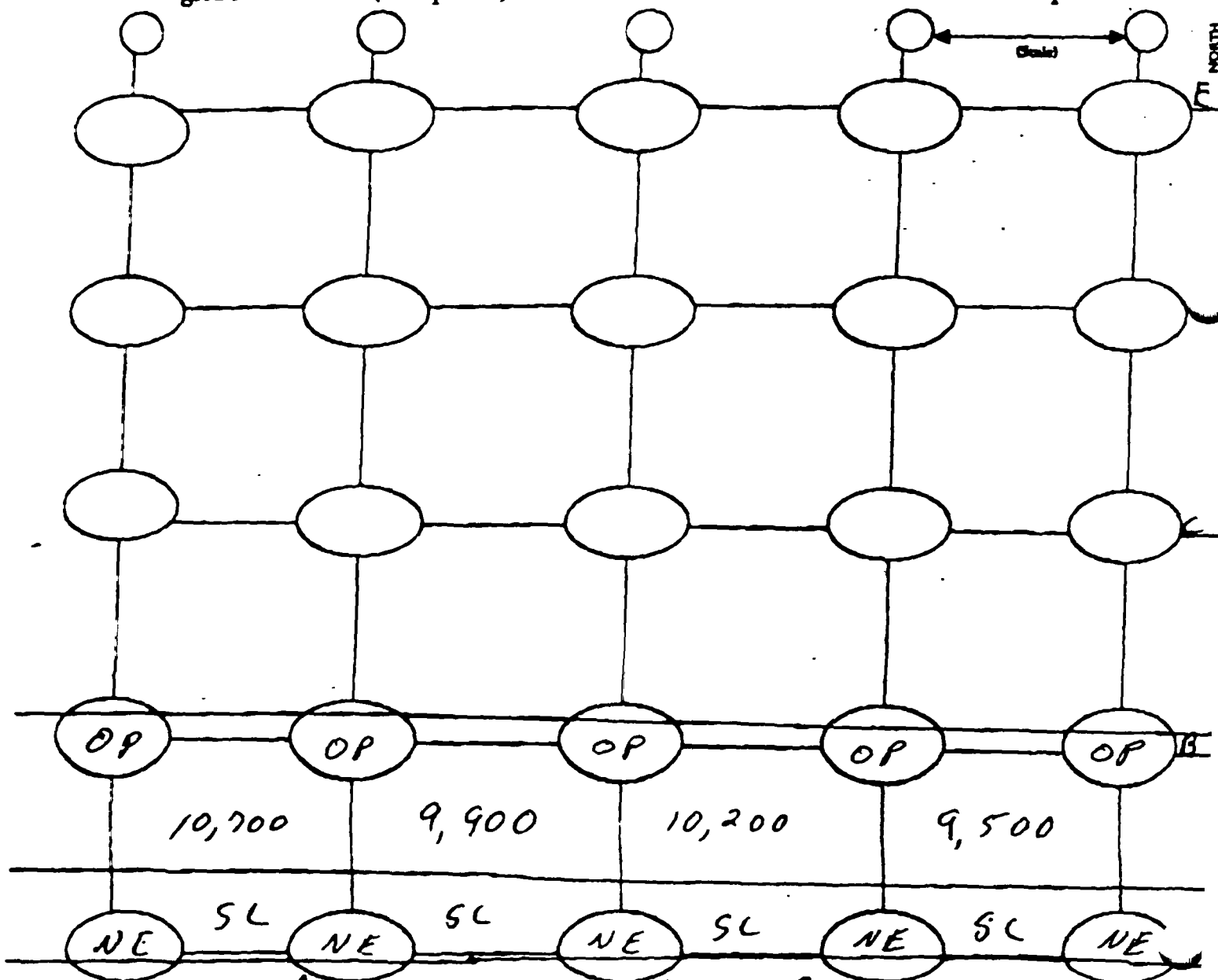
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 3A - 7A cpm

Action Level: 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP₂ over Pass
- exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 6 of 7

Date 8-7-02

Technician J D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

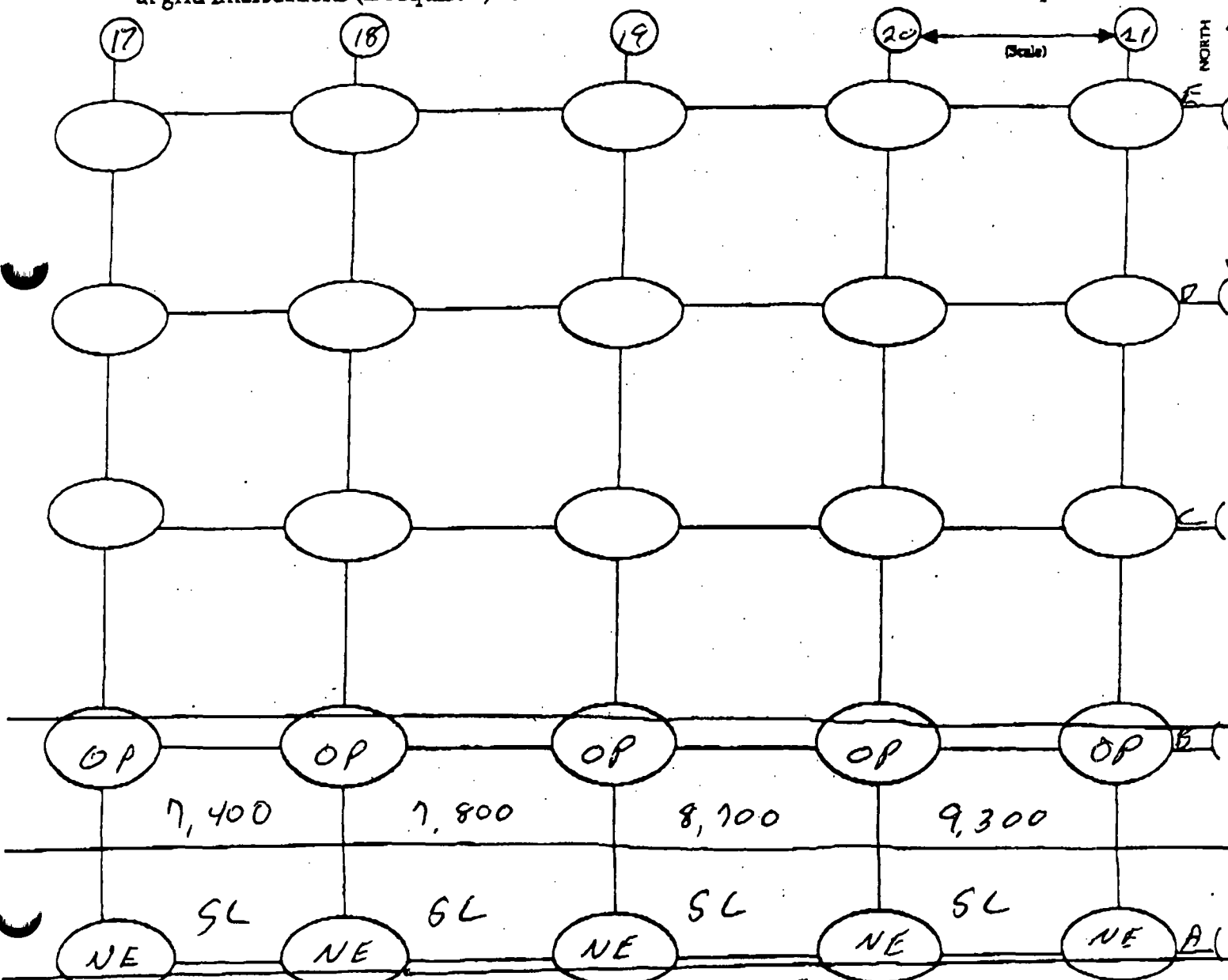
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 7 of 7

STS Consultants, Ltd.

Date 8-7-02

Technician L D Smith
meters *Probe 28*

Inst. Model Ludlum 2221

Serial No. 126496 / 168113

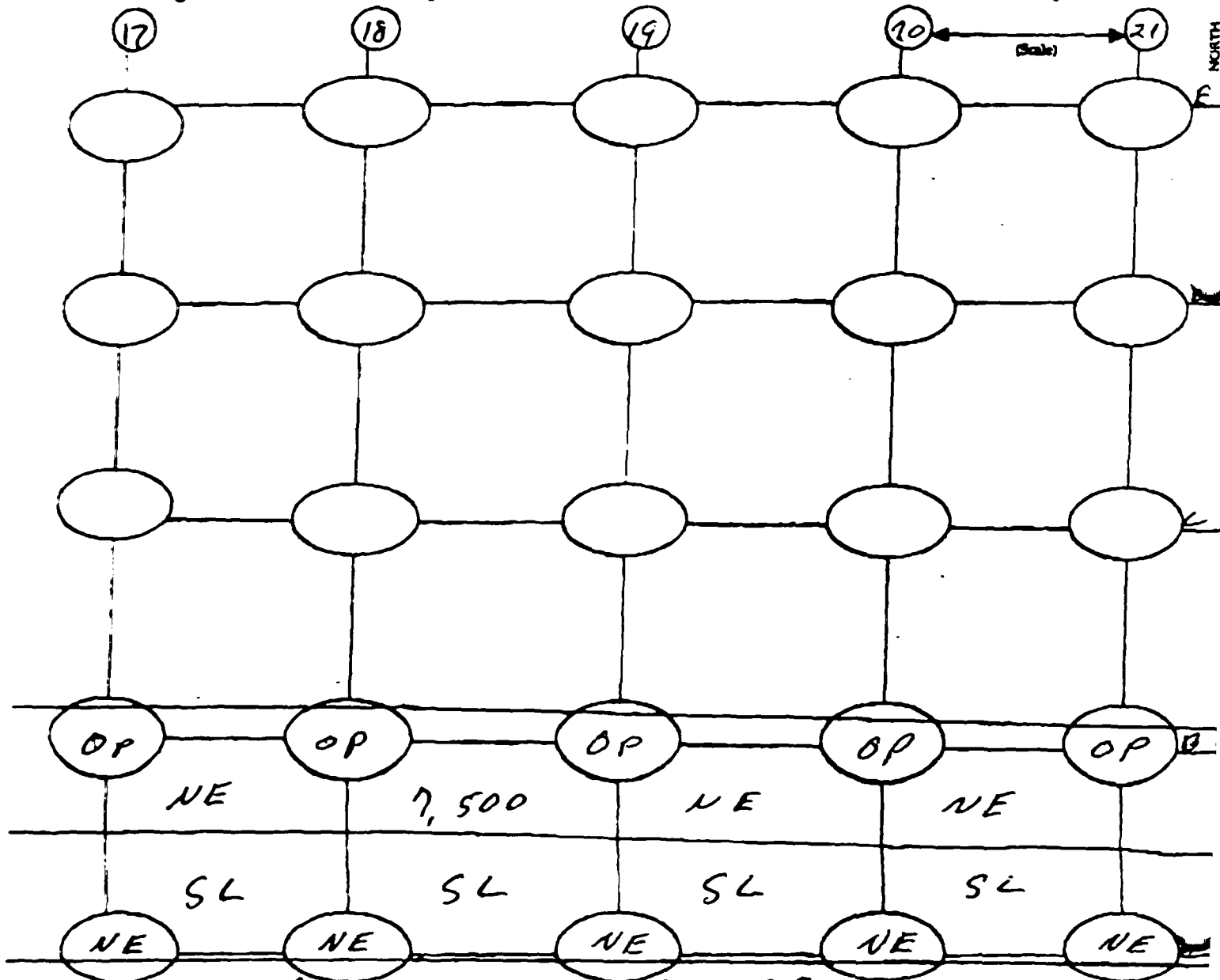
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -8.5'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
--- Exclusion zone boundary NE = Not excavated SL = Slope

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO Page 1 of 6

Date 8-8-02

Technician Justin Hubbert

Inst. Model Liolum 2221

meter # 127242 PROBE 16B144

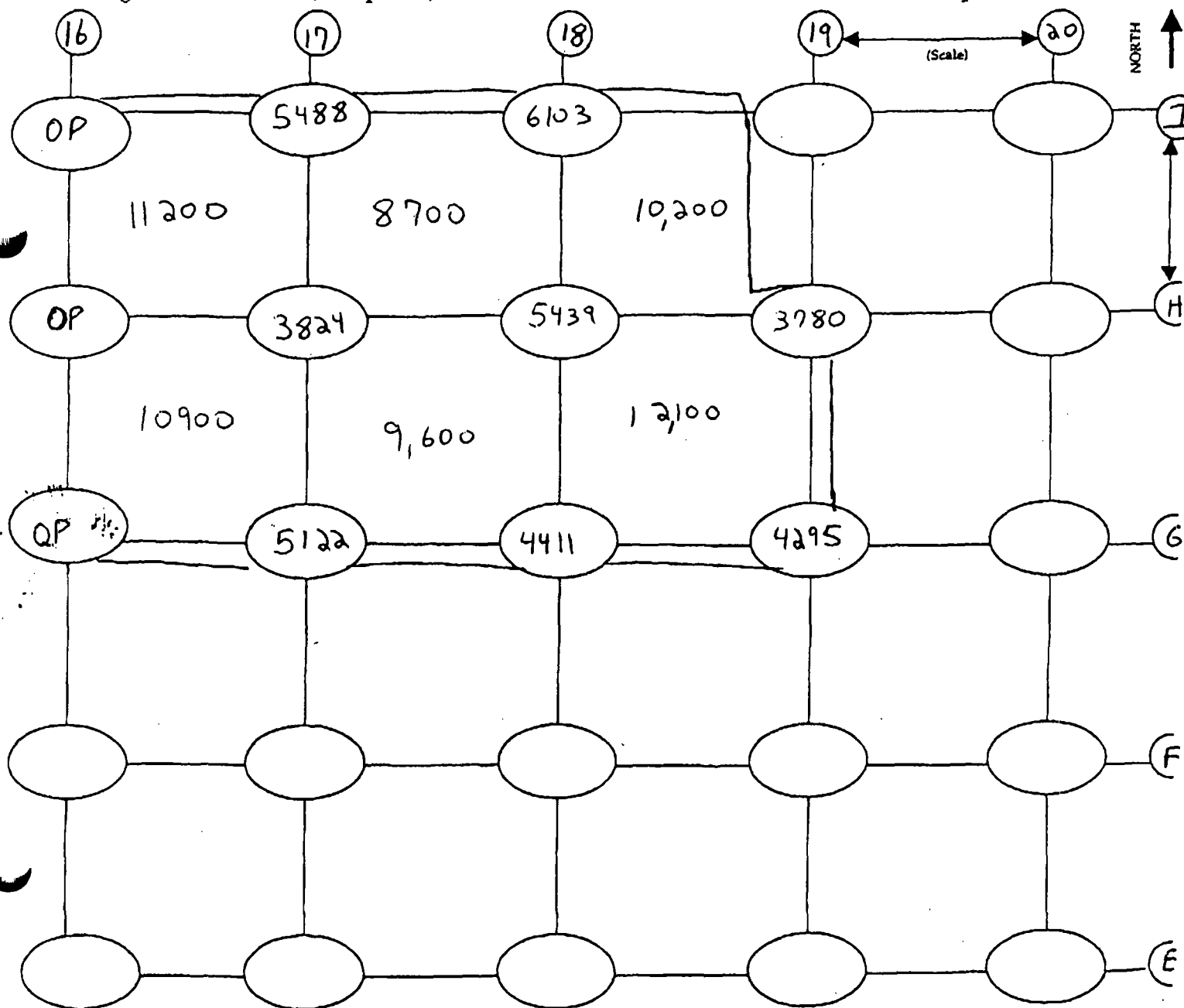
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation SURFACE

Background 5-10 K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 8-8-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

meter# 127242 Probe # 168144

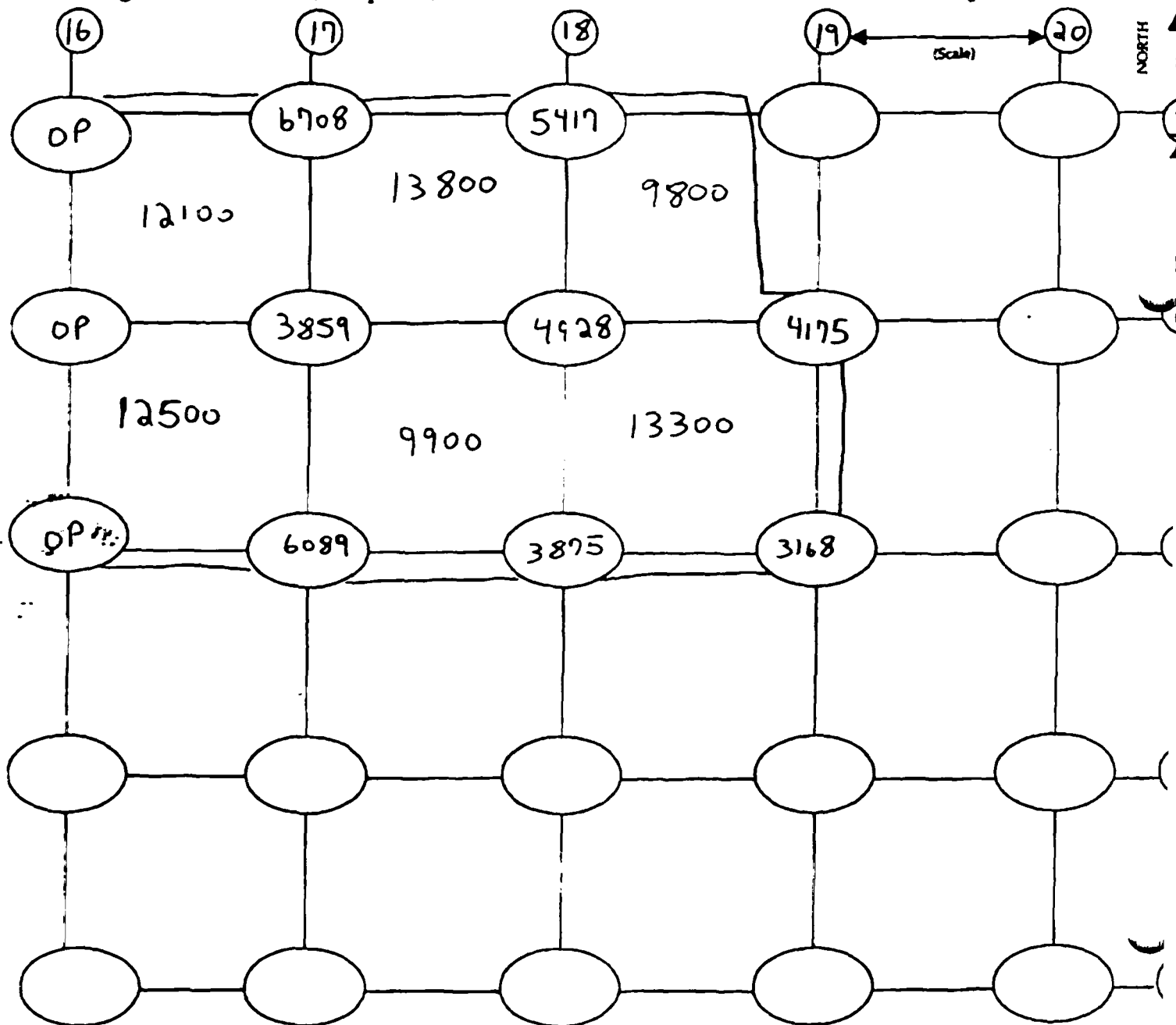
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5 feet

Background 5-10 K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



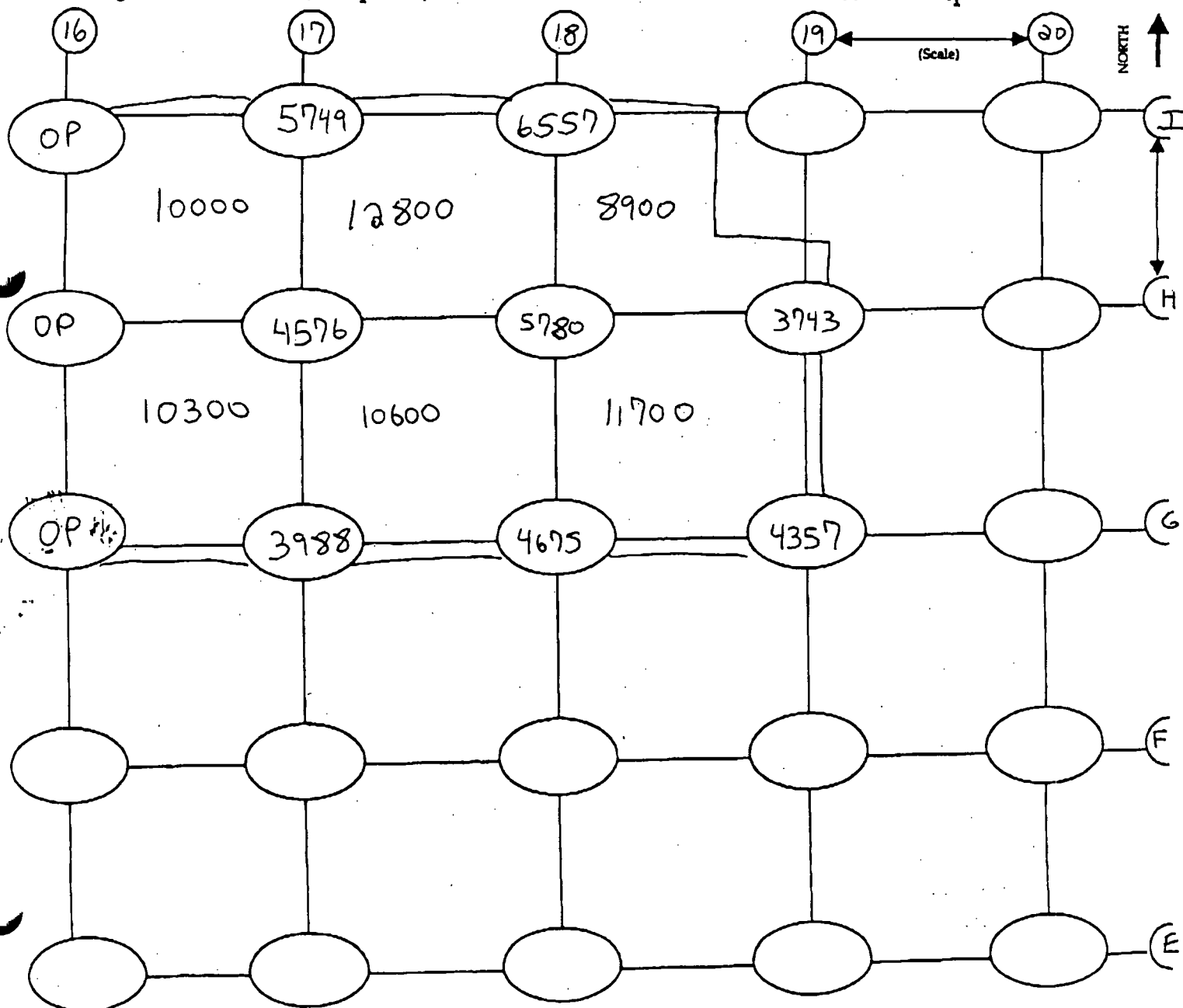


STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6Date 8-8-02Inst. Model Ludlum 2221Technician Justin Hubbertmeter 127242 PROBE# 168144Serial No. 127242Lift Elevation -3 FeetProbe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 8-8-02

Technician Justin Hubbert

Inst. Model Luolum 2221

meter # 127242 Probe # 16B144

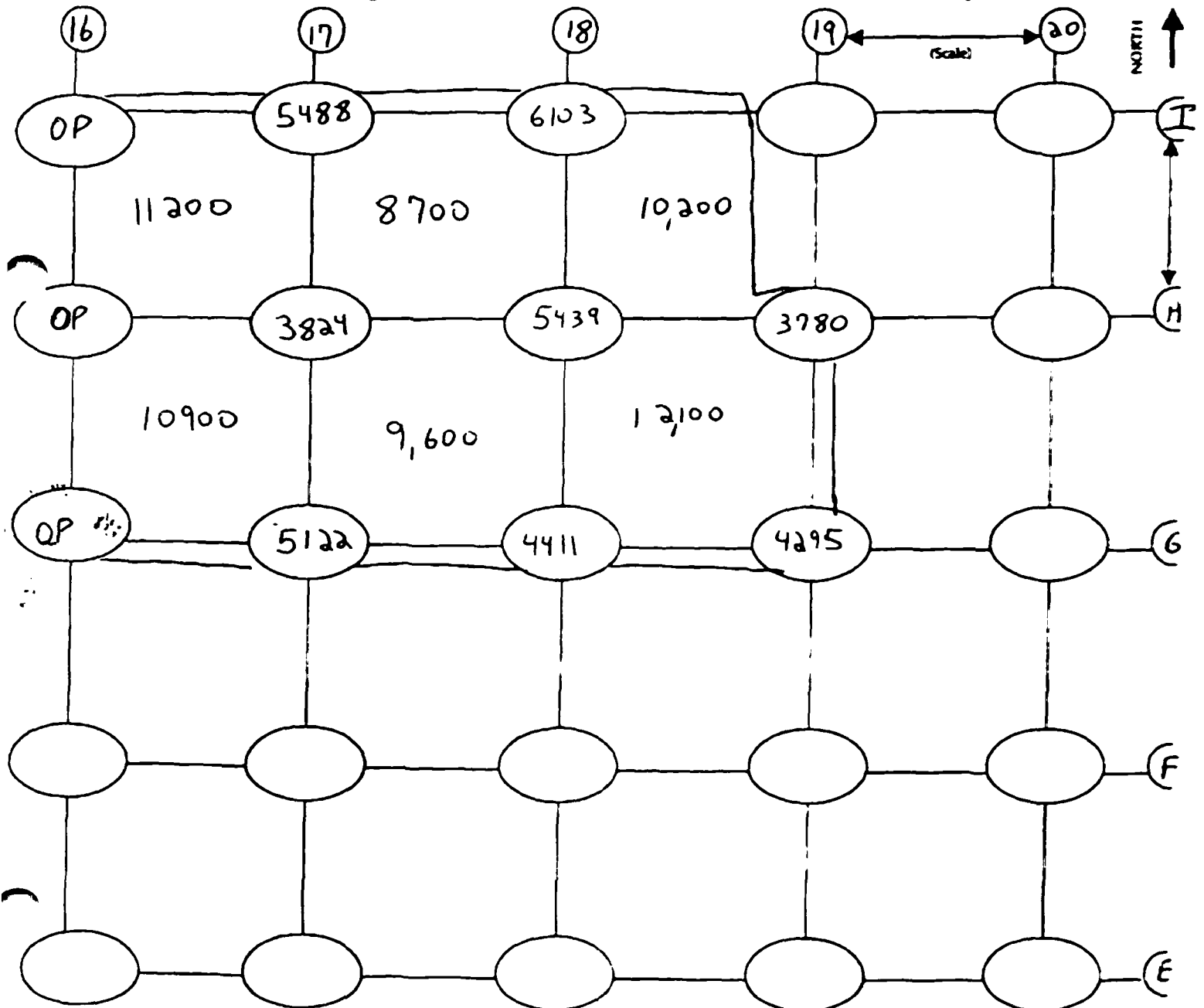
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation SURFACE

Background 5-10 K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page B4 of 6

Date 8-8-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

meter
Serial No. 127242 168144

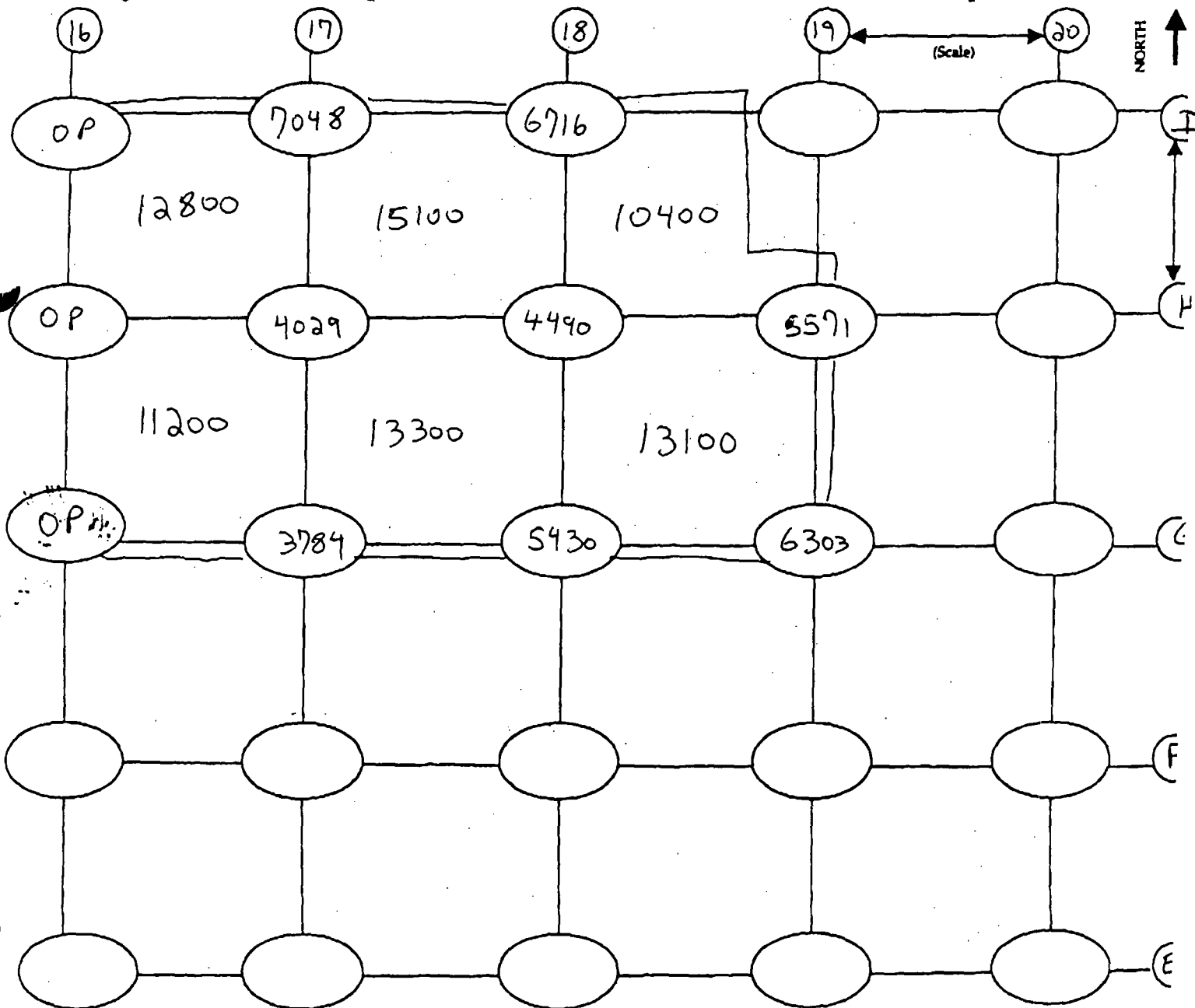
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5 feet

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 35 of 6

STS Consultants, Ltd.

Date 8-8-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

meter PROBE#
Serial No. 127242 168144

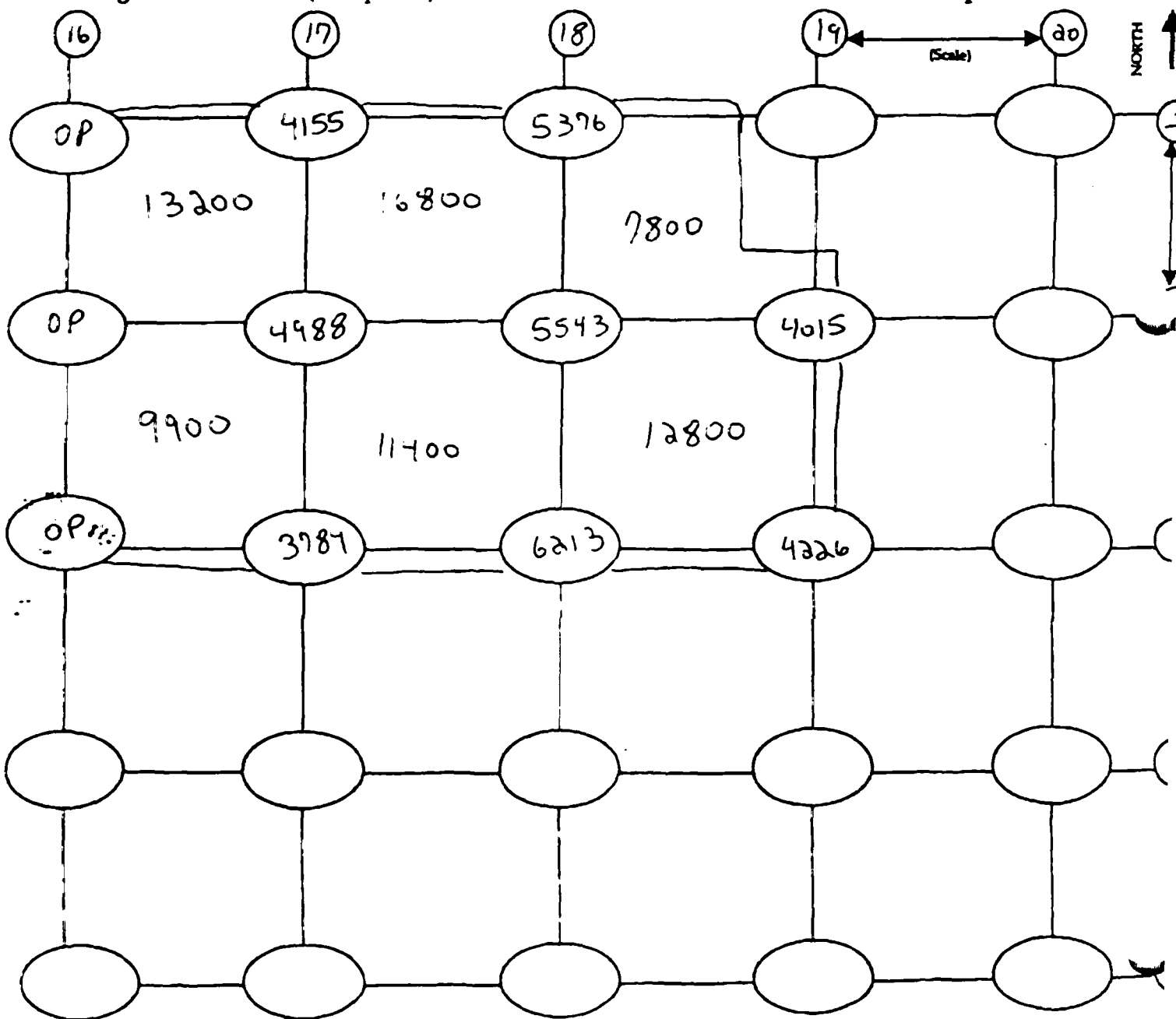
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation ~6 feet

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

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Date 8-8-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Serial No. 127242 ^{meter} 168144 ^{PROBE#}

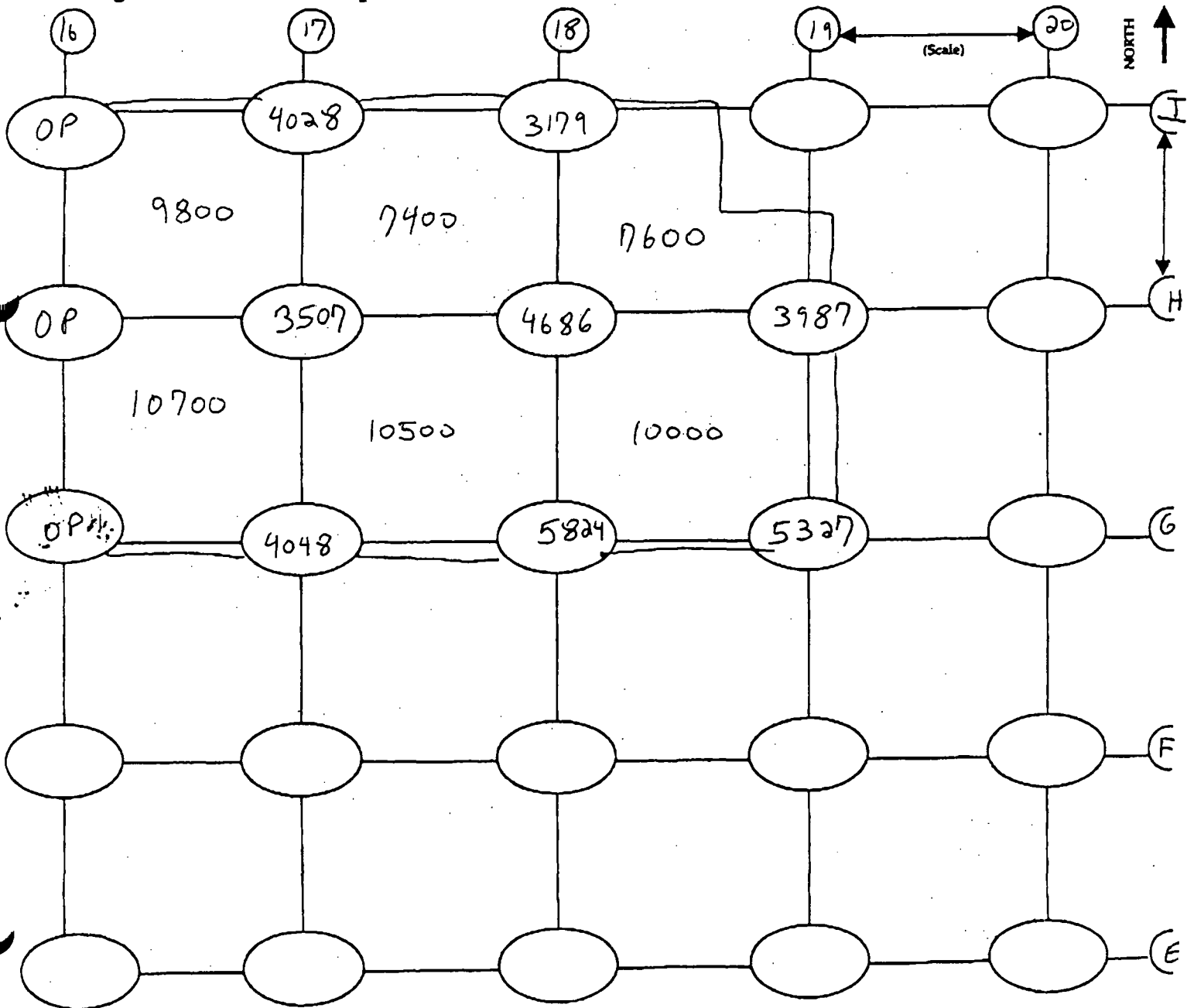
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5 feet

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





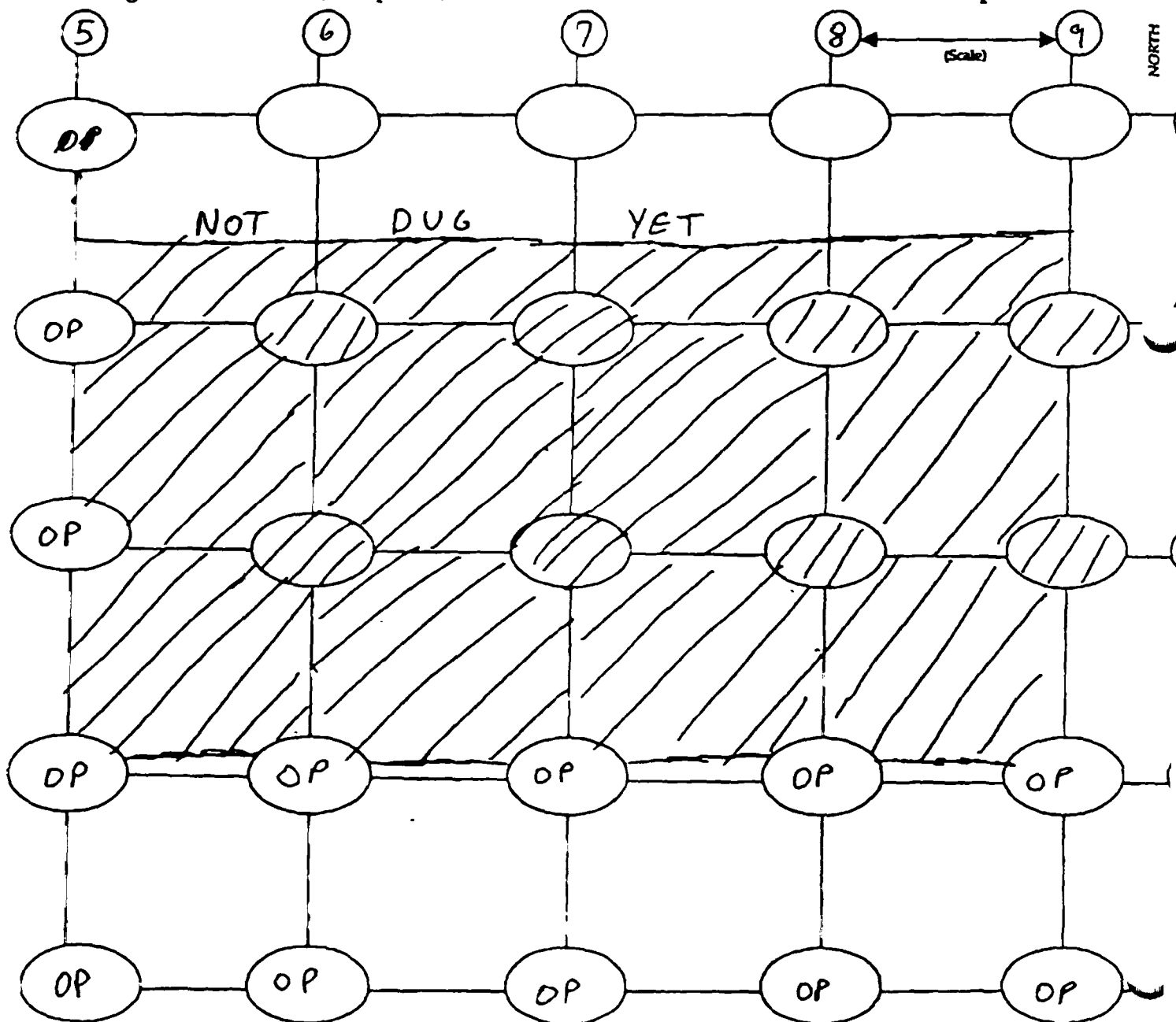
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 6

STS Consultants, Ltd.

Date 7-29-02Technician Justin HubbertInst. Model Ludlum 2221meter # 127242 Probe # 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SURFACEBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



EXCAVATED AS EXCLUSION ZONE

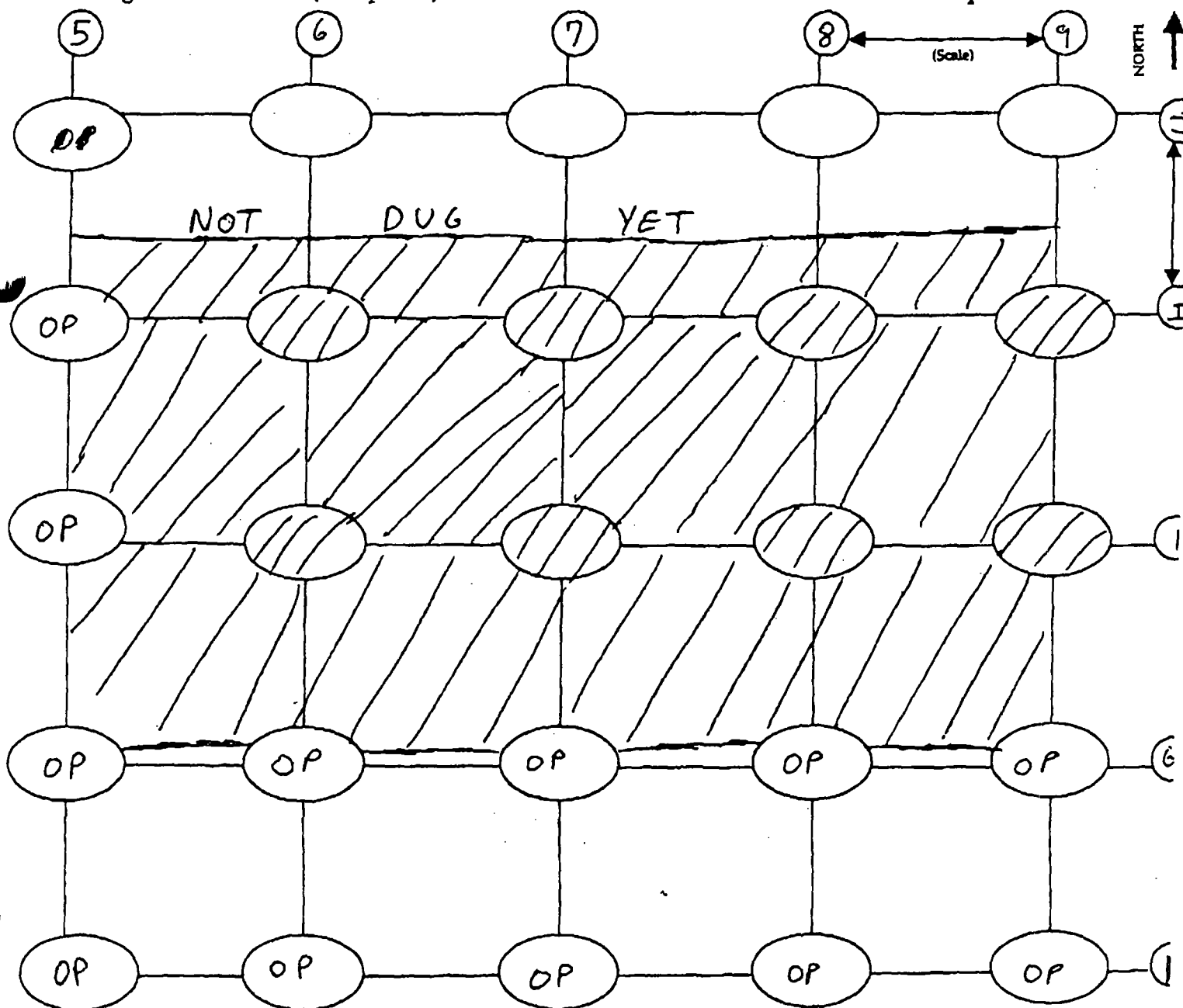


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 2 of 6Date 7-29-02Technician Justin HubbertInst. Model Luplum 2221meter # 127242 Probe # 168144Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -1.5 ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



NA - EXCAVATED AS EXCLUSION ZONE



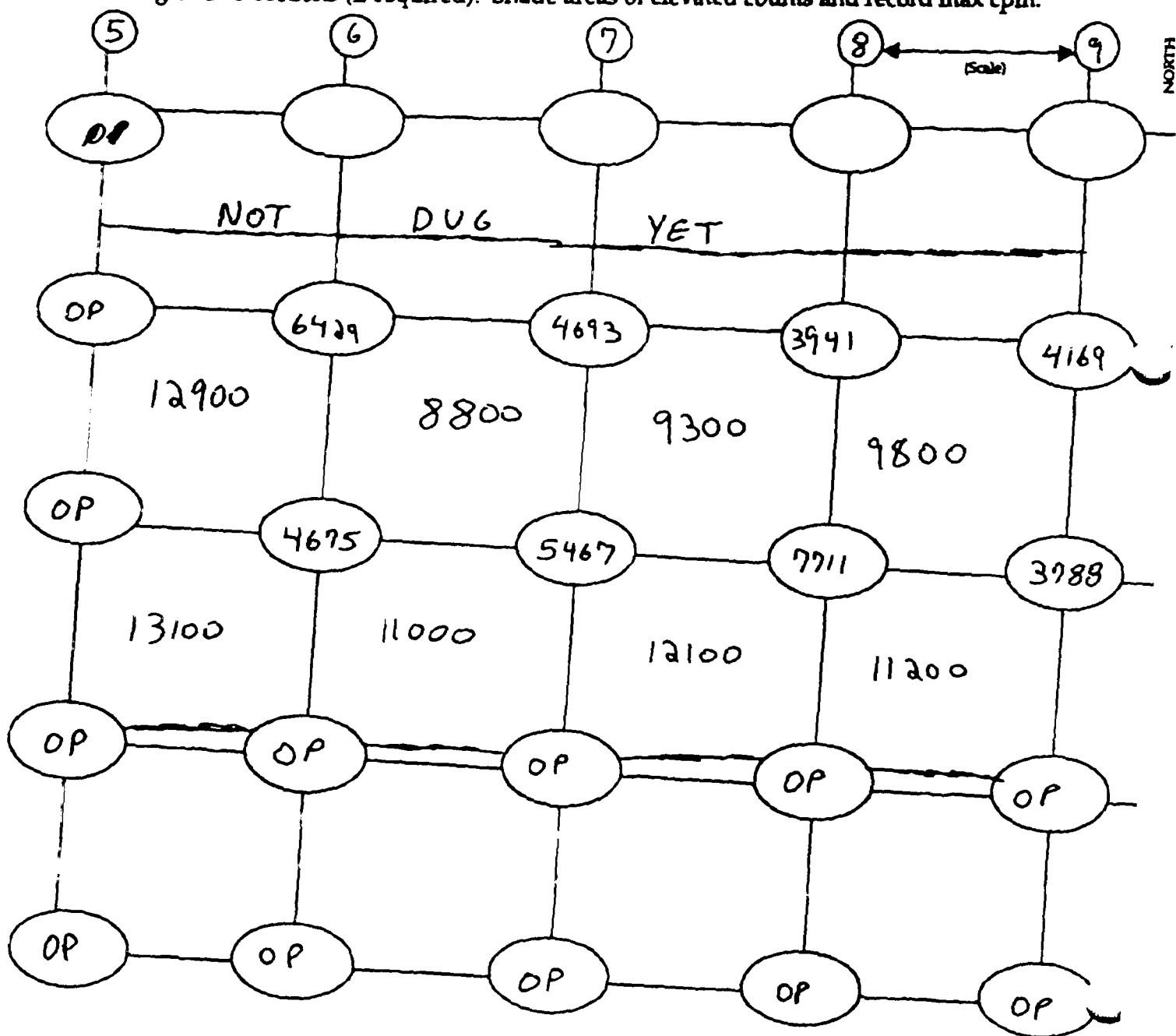
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 7-29-02Technician Justin HubbardInst. Model Ludlum 2221meter # 127242 Probe # 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3 FtBackground 5-10 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





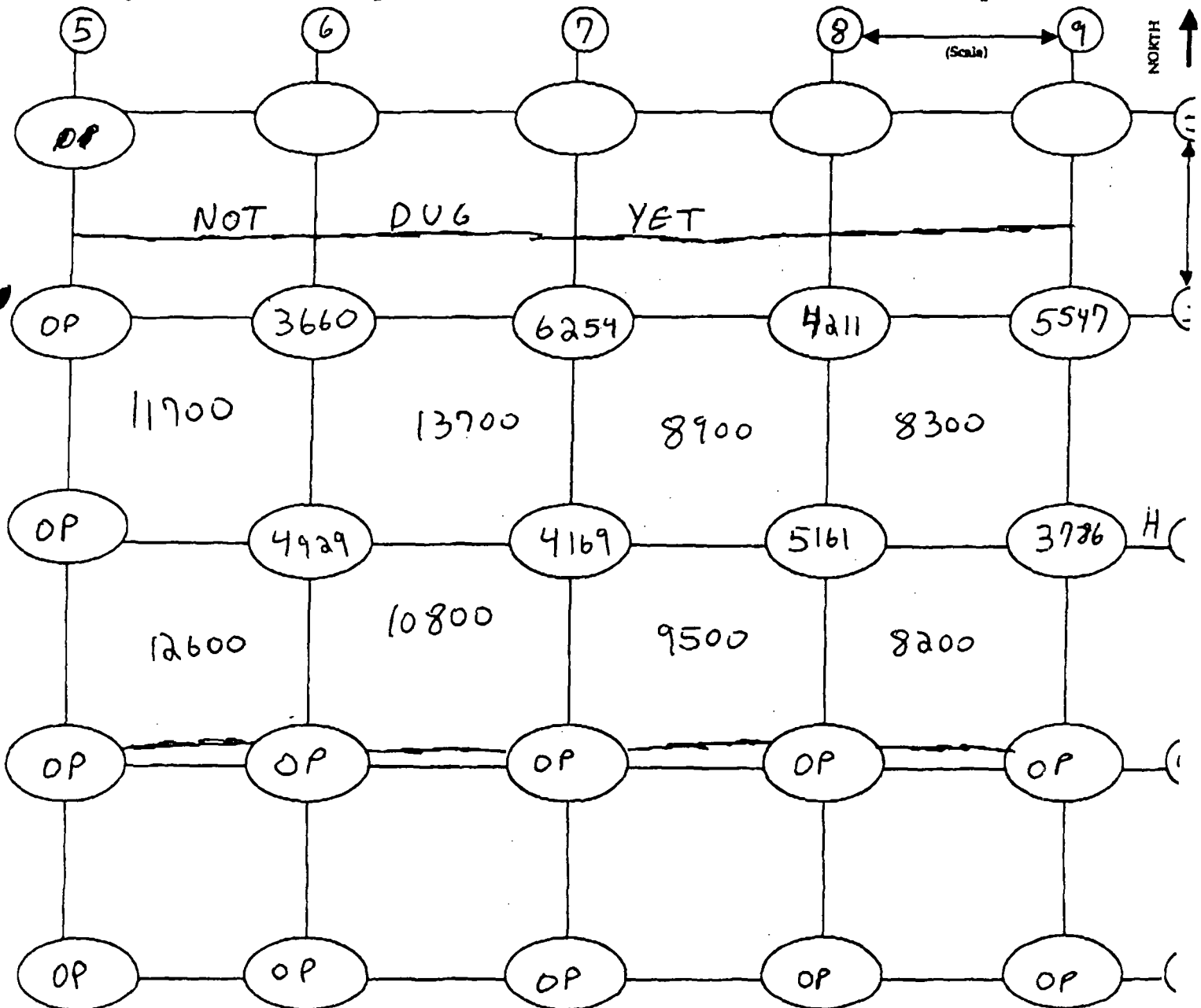
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 7-29-02Technician Justin HubbertInst. Model Luplum 2221meter # 127242 Probe # 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





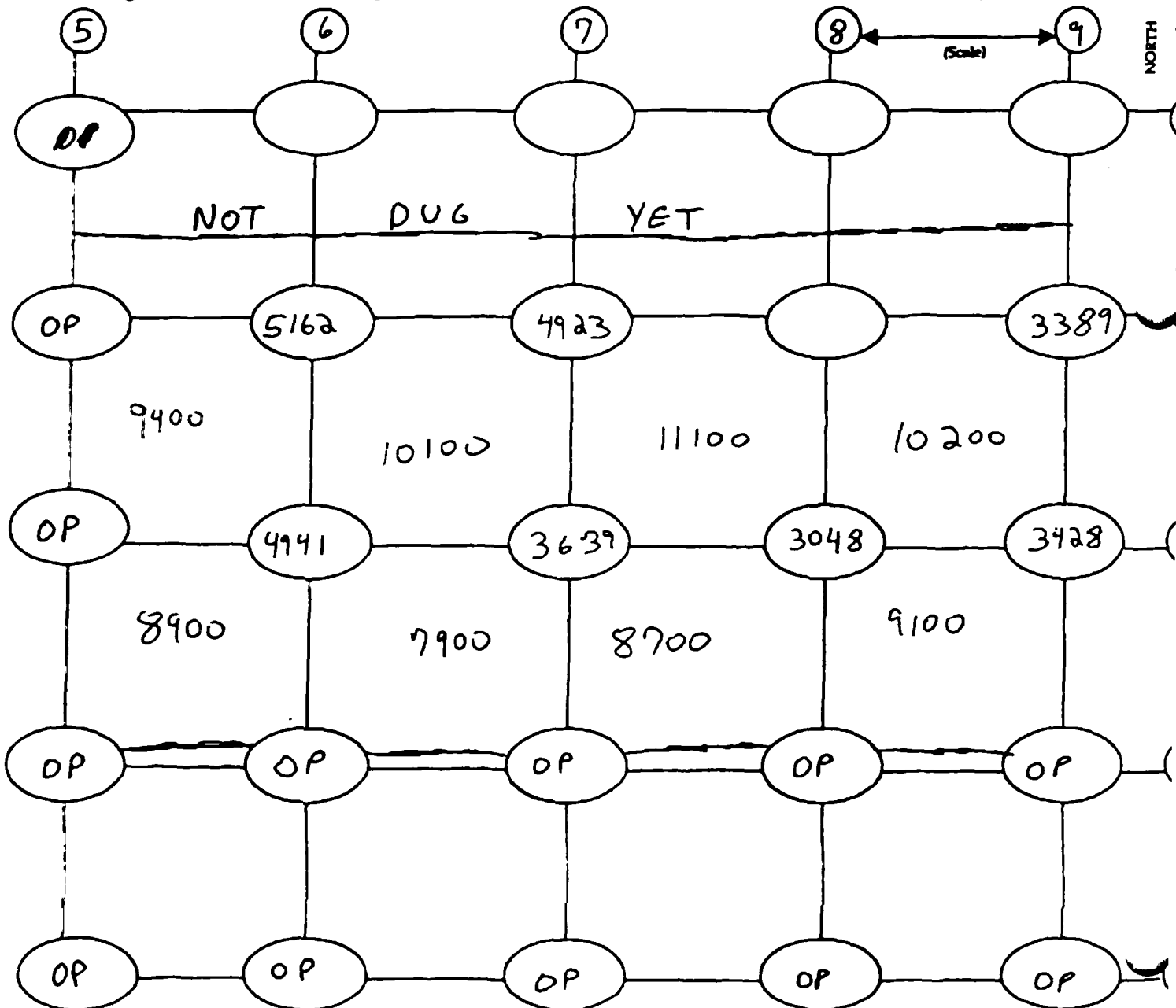
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 5 of 6

STS Consultants, Ltd.

Date 7-29-02Technician Justin HubbertInst. Model Luplum 2221meter # 127242 Probe # 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6 ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 6 of 6

STS Consultants, Ltd.

Date 7-29-02

Technician Justin Hubbert

Inst. Model Luplum 2221

meter # 127242 Probe # 168144

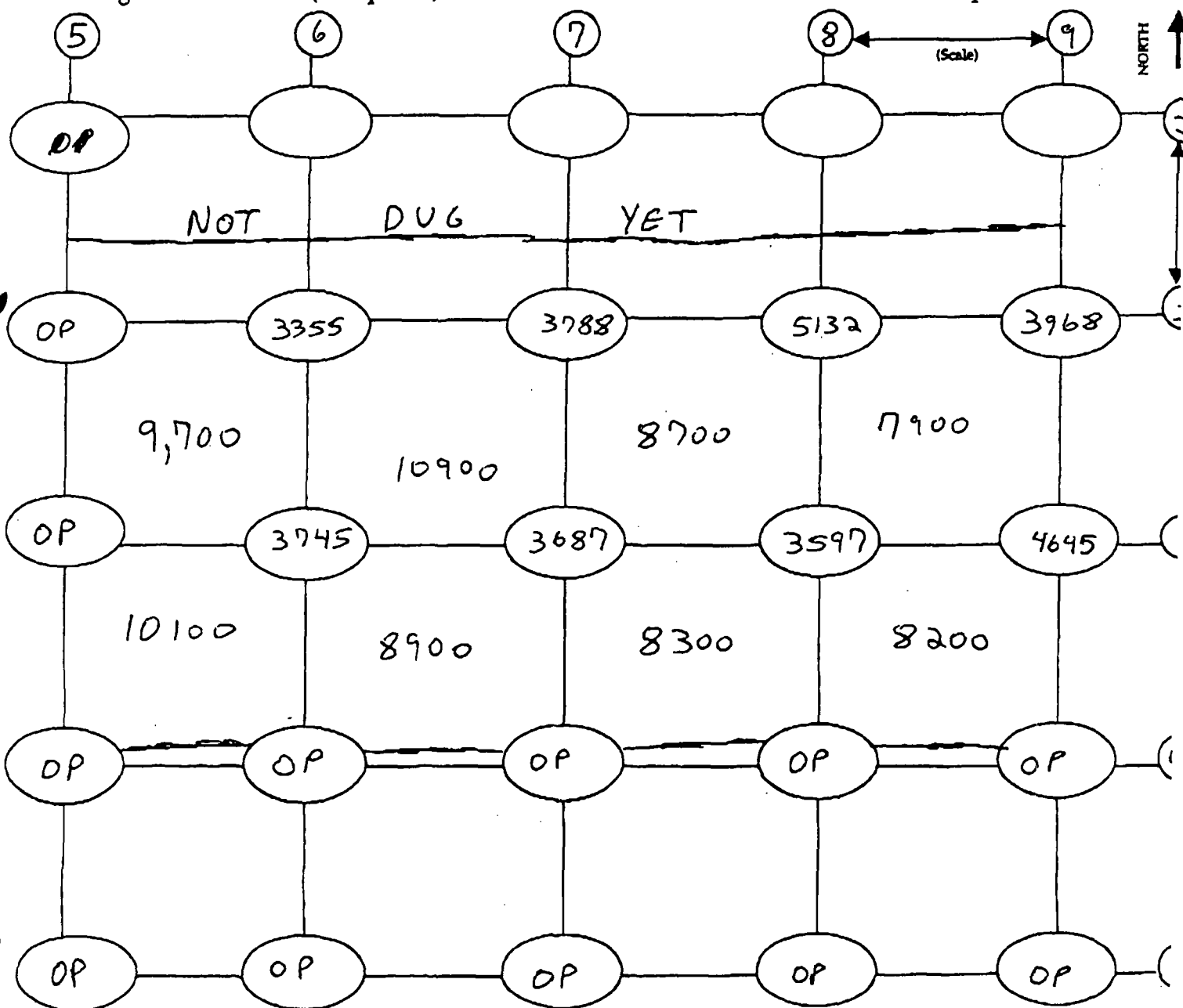
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5 feet

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





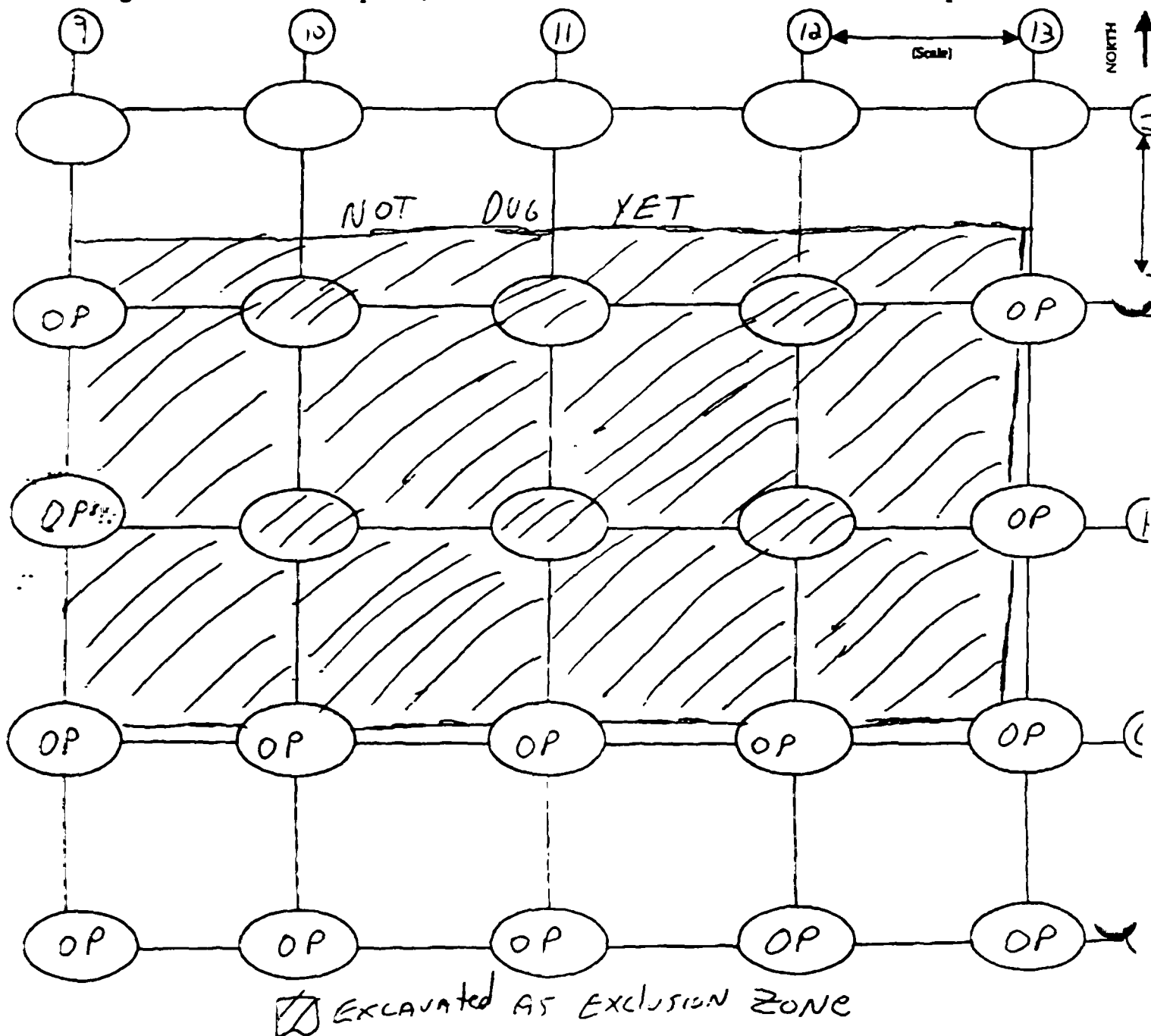
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6

STS Consultants, Ltd.

Date 8-6-02Technician Justin HubbertInst. Model Ludlum 2221Serial No. 127292 ^{meter} 168144 ^{PROBE#}Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SURFACEBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 2 of 6

Date

8-6-02

Technician

Justin Hubbert

Inst. Model

Ludlum 2221

Serial No.

meter

127242

PROBE#

168144

Probe Type:

1'x1" NaI / 2'x2" NaIShielded / Not Shielded

Lift Elevation

-1.5 ft

Background

5-10K

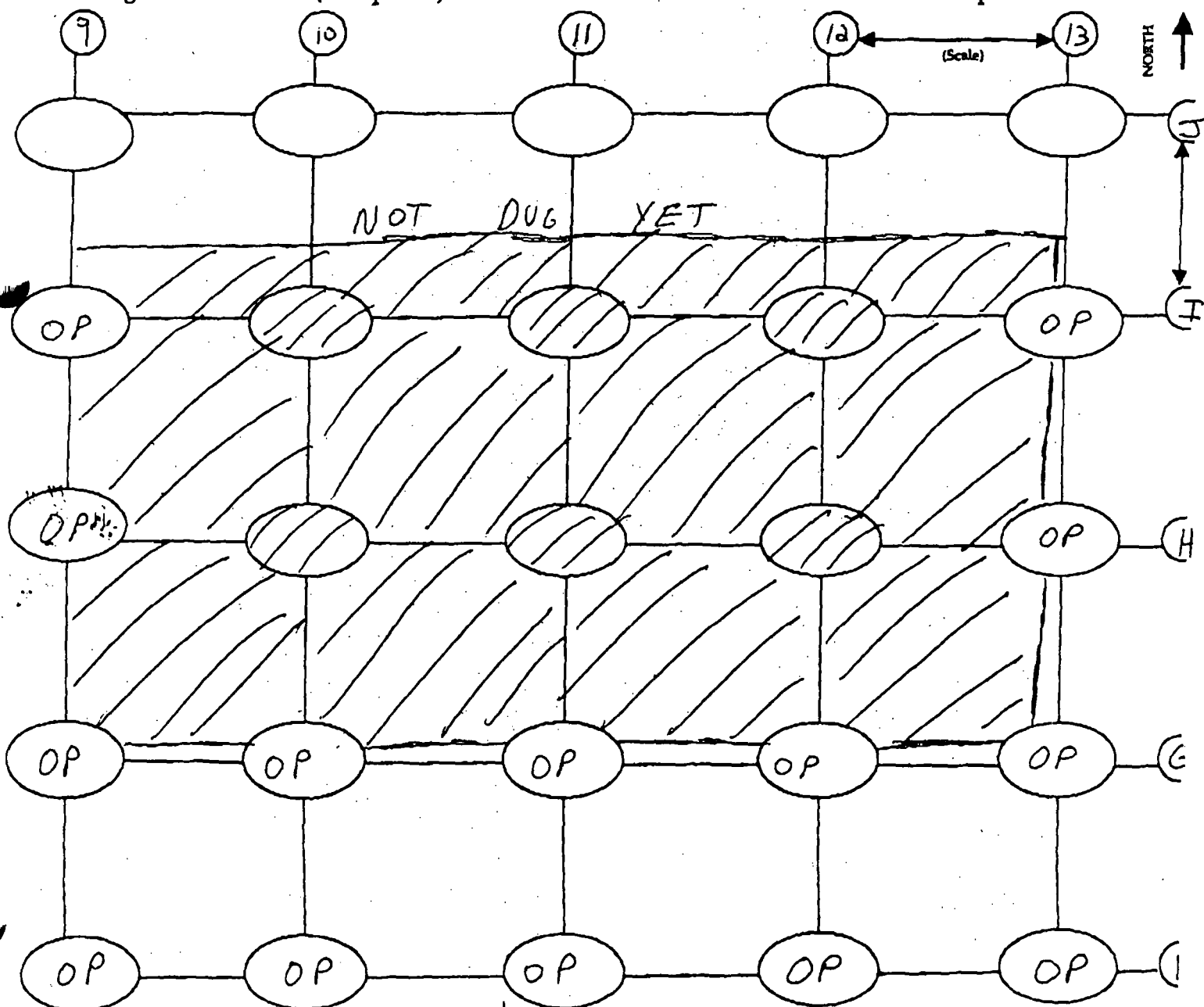
cpm

Action Level

21,072

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



- Excavated AS EXCLUSION ZONE



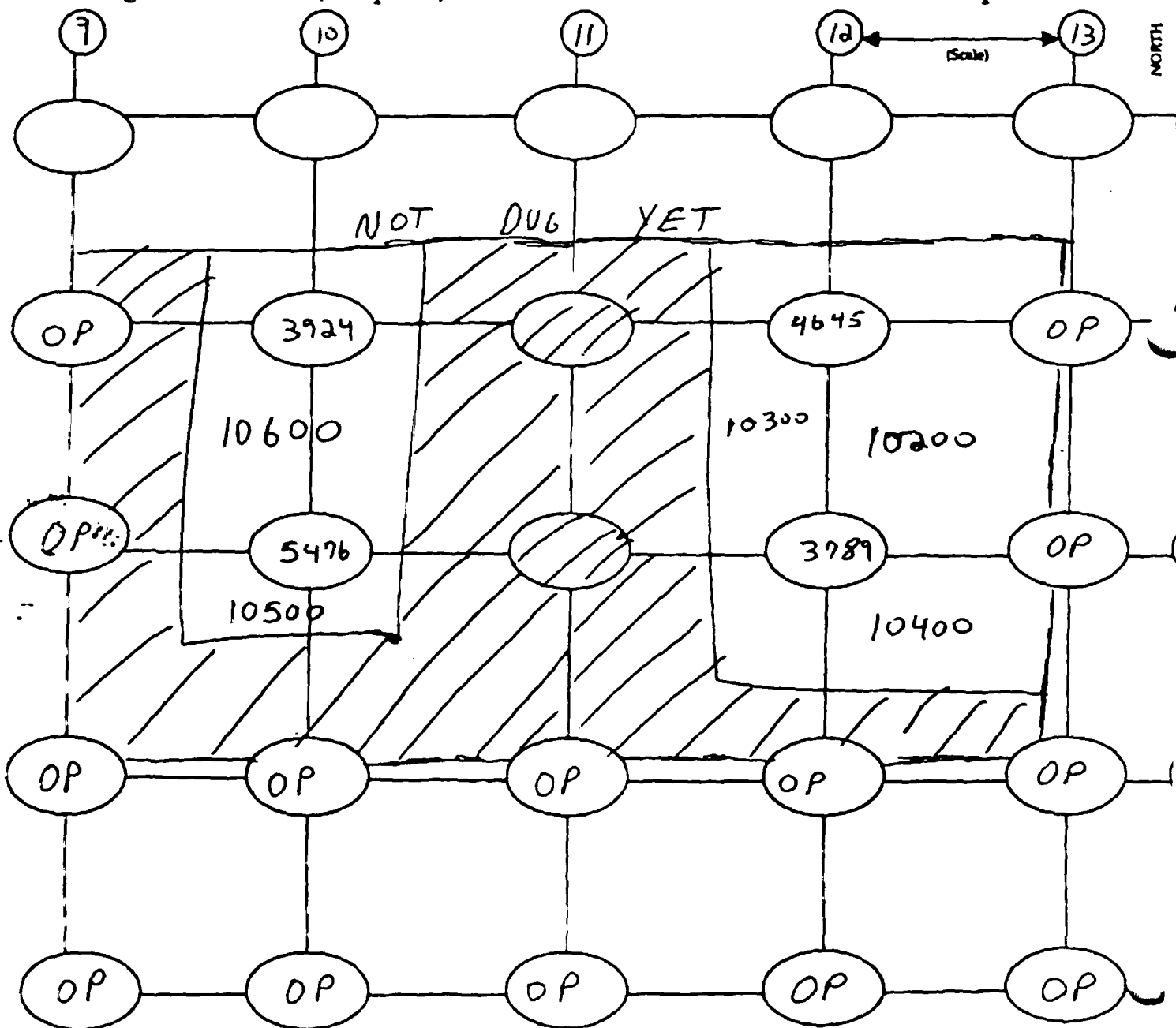
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6

STS Consultants, Ltd.

Date 8-6-02Technician Justin HubbertInst. Model Ludlum 2221Serial No. 127242 ^{meter} 168144 ^{PROBE#}Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3 ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☐ - Excavated AS EXCLUSION ZONE



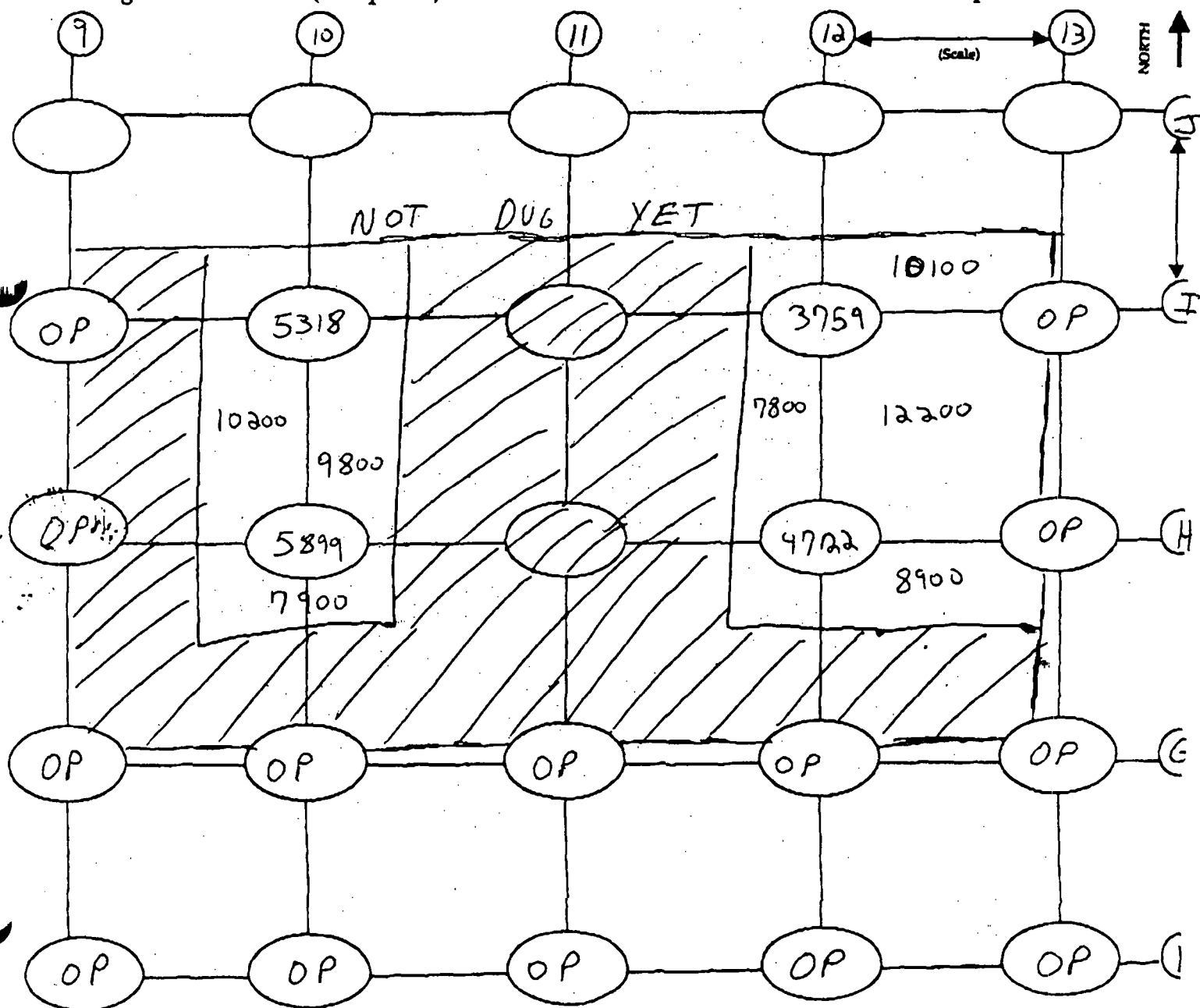
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 34 of 6

STS Consultants, Ltd.

Date 8-6-02Technician Justin HubbertInst. Model Ludlum 2221Serial No. 127242 ^{meter} 168144 ^{PROBE#}Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5 ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☐ - Excavated AS Exclusion Zone



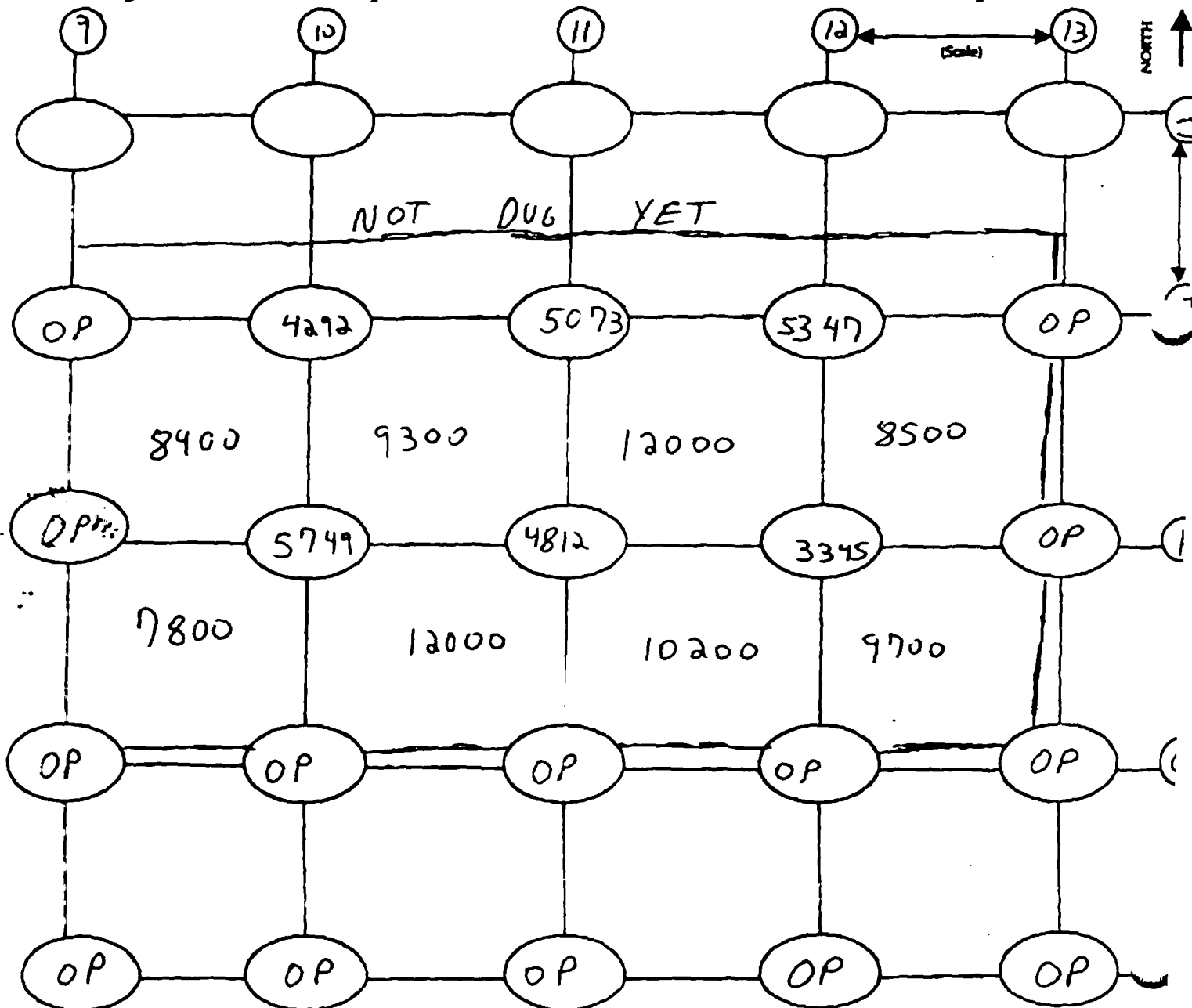
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page B5 of 6

STS Consultants, Ltd.

Date 8-6-02Technician Justin HubbertInst. Model Ludlum 2221meter PROBE#
Serial No. 127242 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6 ftBackground 5-10K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 36 of 6

STS Consultants, Ltd.

Date 8-6-02

Technician Justin Hubbert

Inst. Model Ludlum 2221

Serial No. 127242

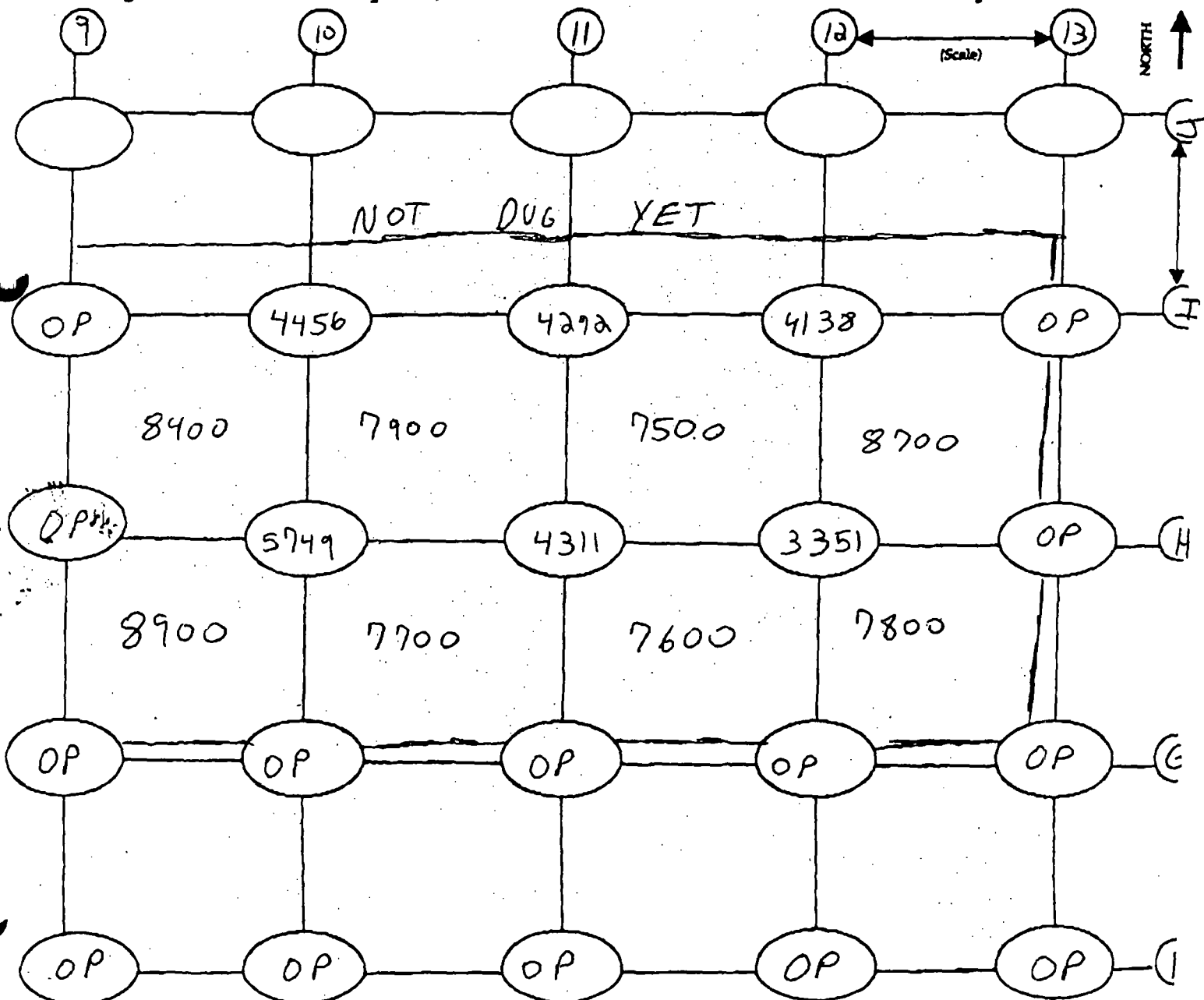
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5 ft

Background 5-10K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 8-9-02

Technician L. D. Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

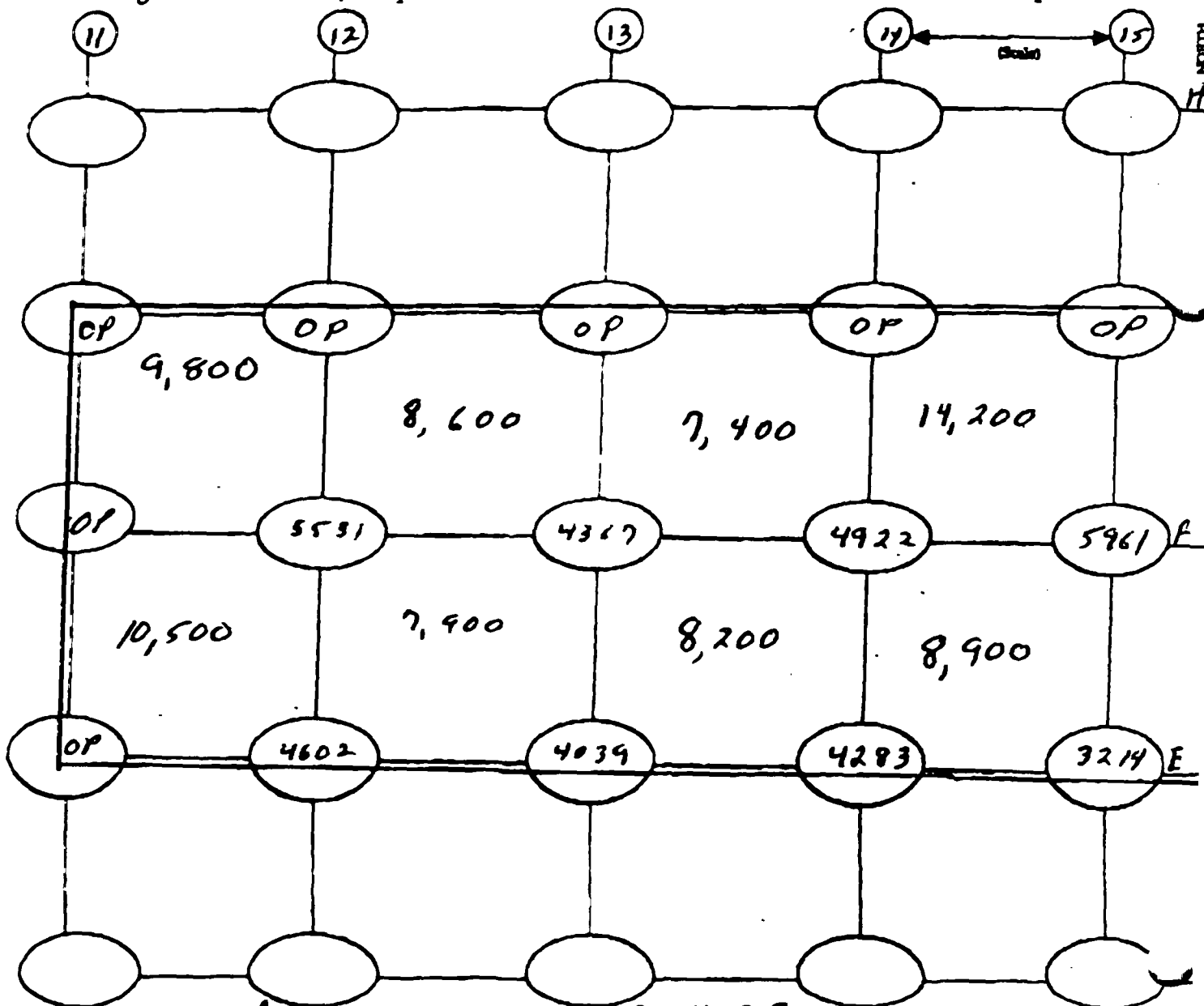
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
SL = Slope



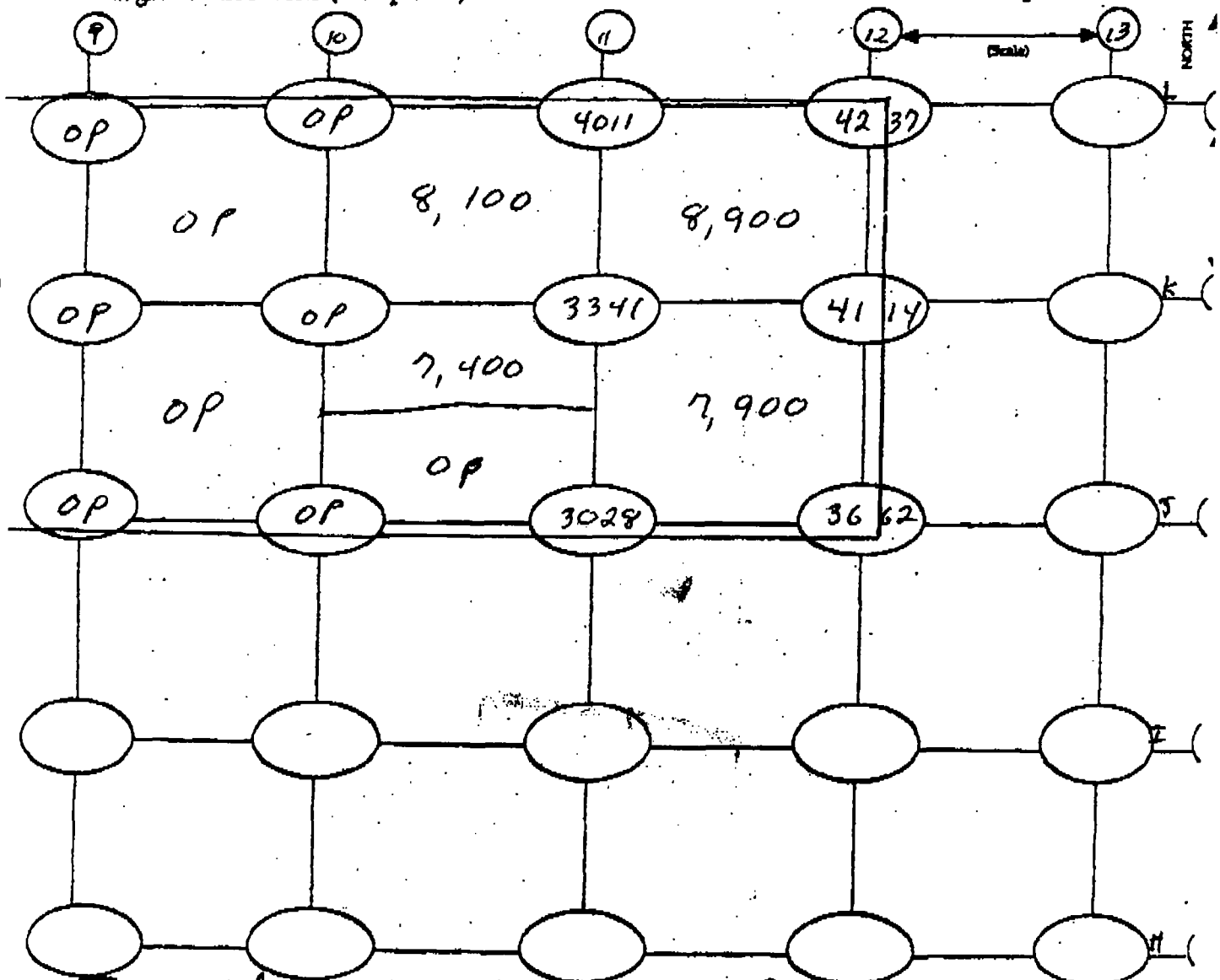
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 6

STS Consultants, Ltd.

Date 8-29-02Technician I D SmithInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded / Not ShieldedLift Elevation - 7.5'Background 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
 Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 2 of 5

Date 8-9-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

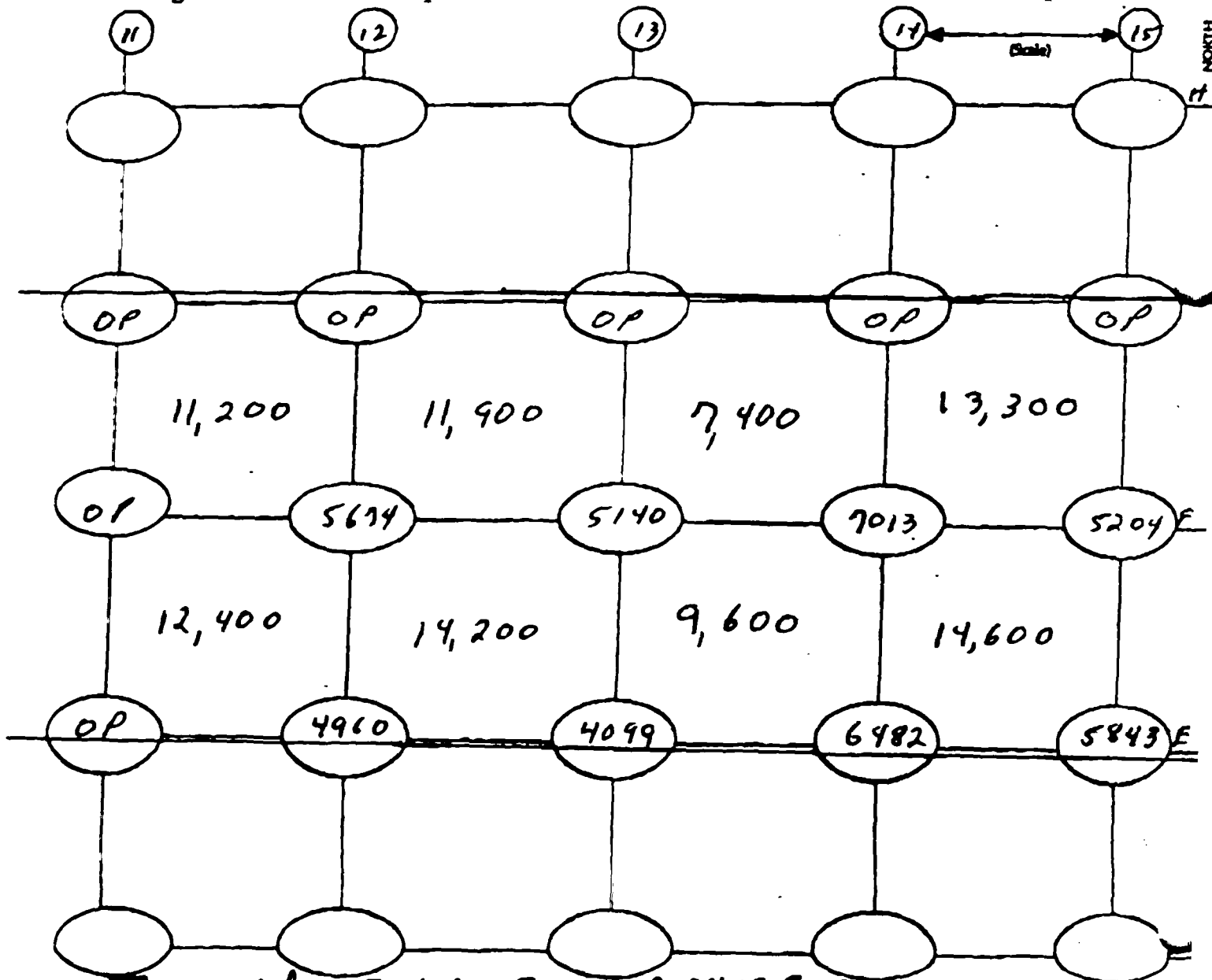
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 7A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Over Page
 * - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 3 of 5

Date 8-9-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

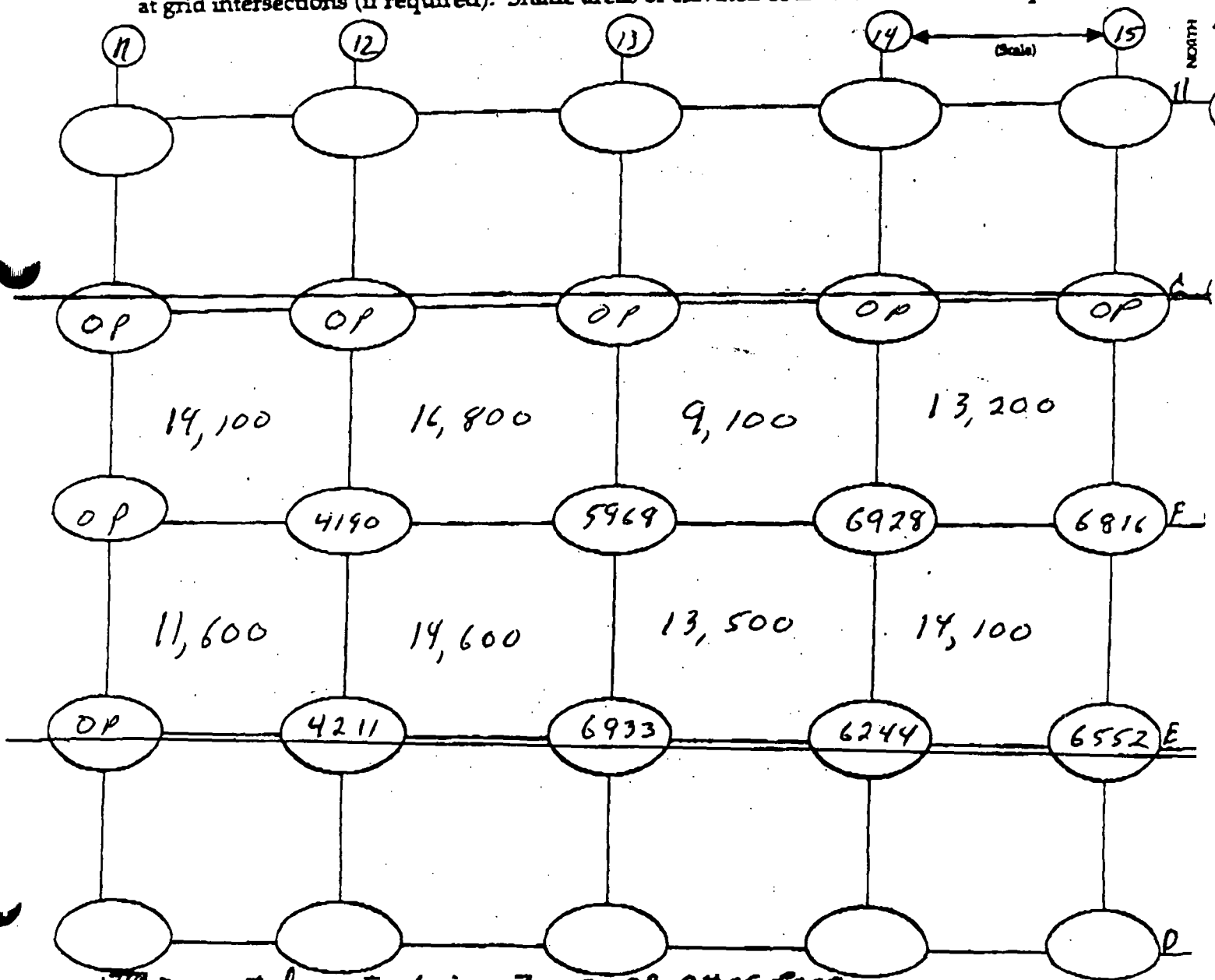
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 3'

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 8-9-02

Technician J D Smith
meters Probe

Inst. Model Ludlum 2221

Serial No. 126496 168143

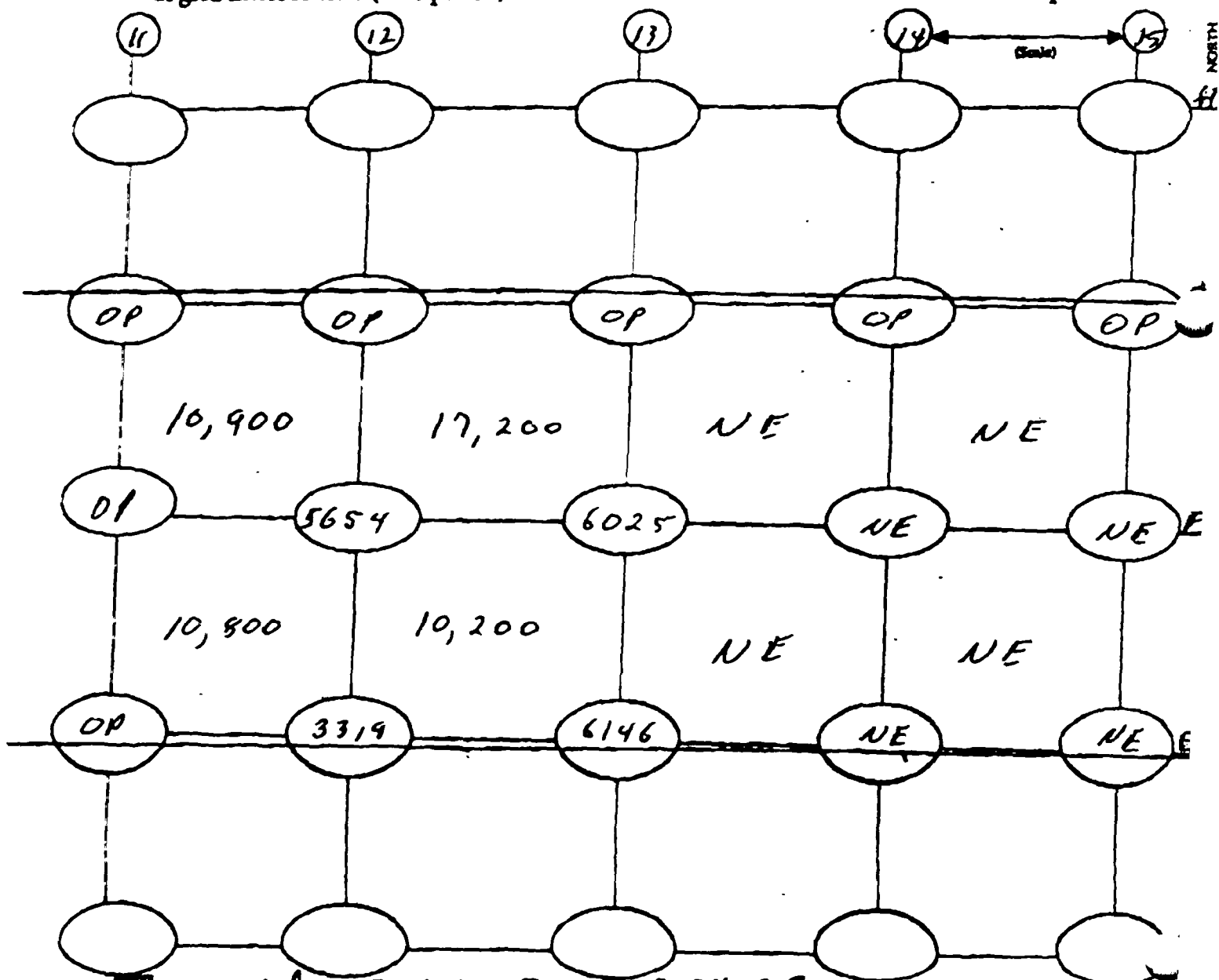
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4-5'

Background 46-86 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
SL: Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 6

Date 8-9-02

Technician LD Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 168143

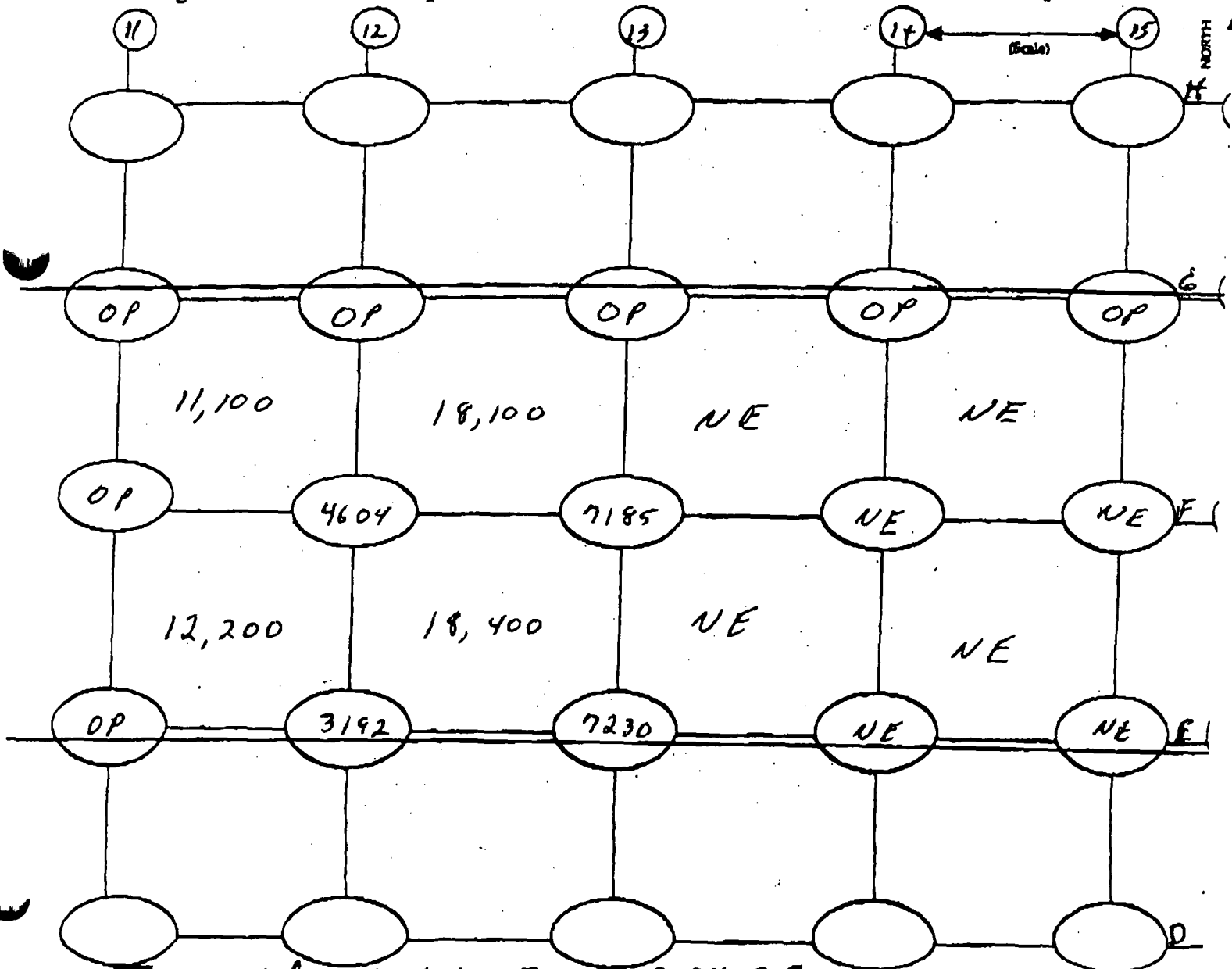
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 4K-8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 - Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 6 of 6

Date 8-9-02

Technician J D Smith
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 126496 168193

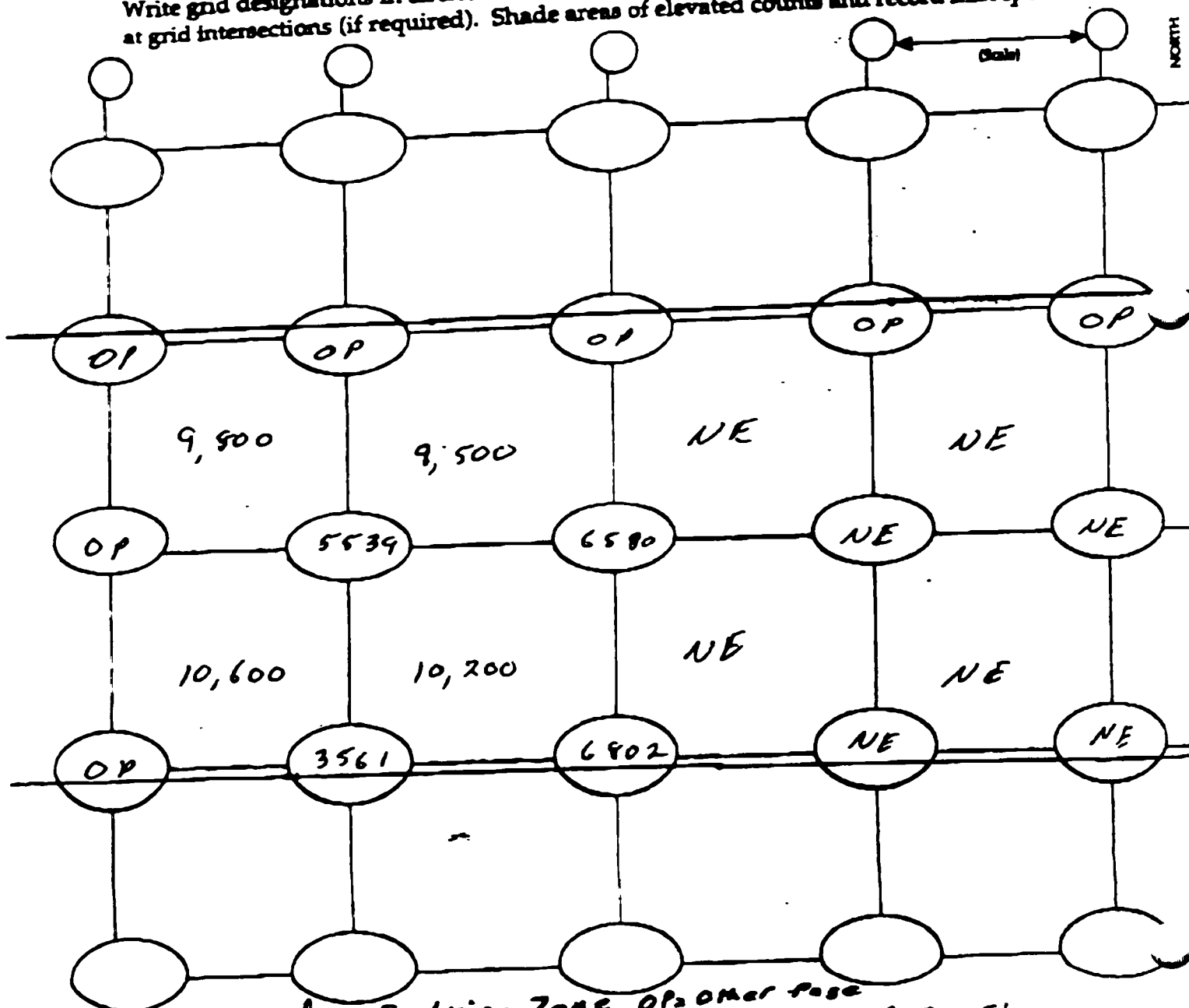
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 4k - 8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, other face
SL = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO Page 1 of 3

Date 8-12-02

Technician TD Smith
meter # Probe 2

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

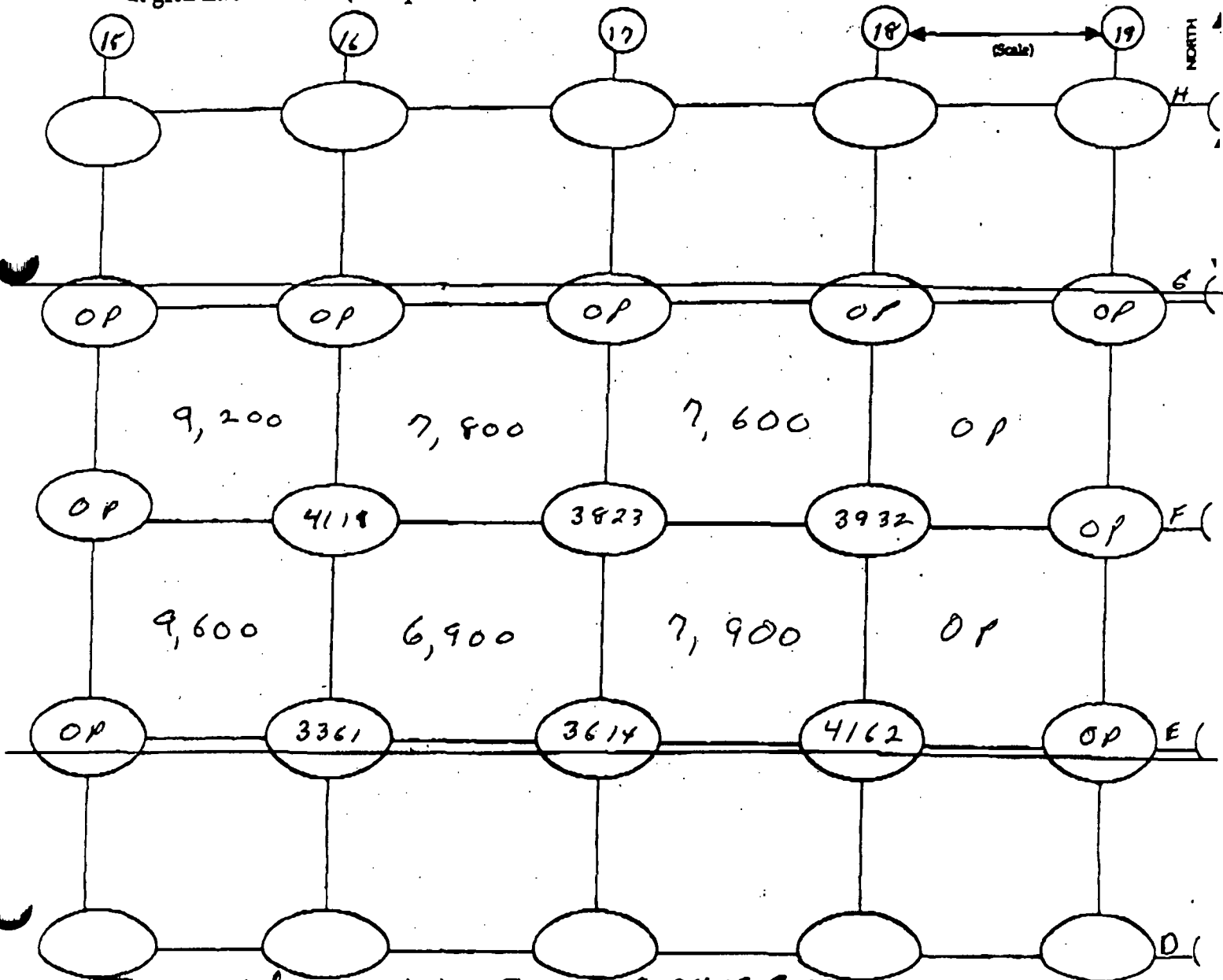
Probe Type: 1'x1" NaI // 2'x2" NaI
Shielded ☒ Not Shielded

Lift Elevation Surface

Background 4K-8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
*-- Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 3

STS Consultants, Ltd.

Date 8-12-02

Technician TD Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

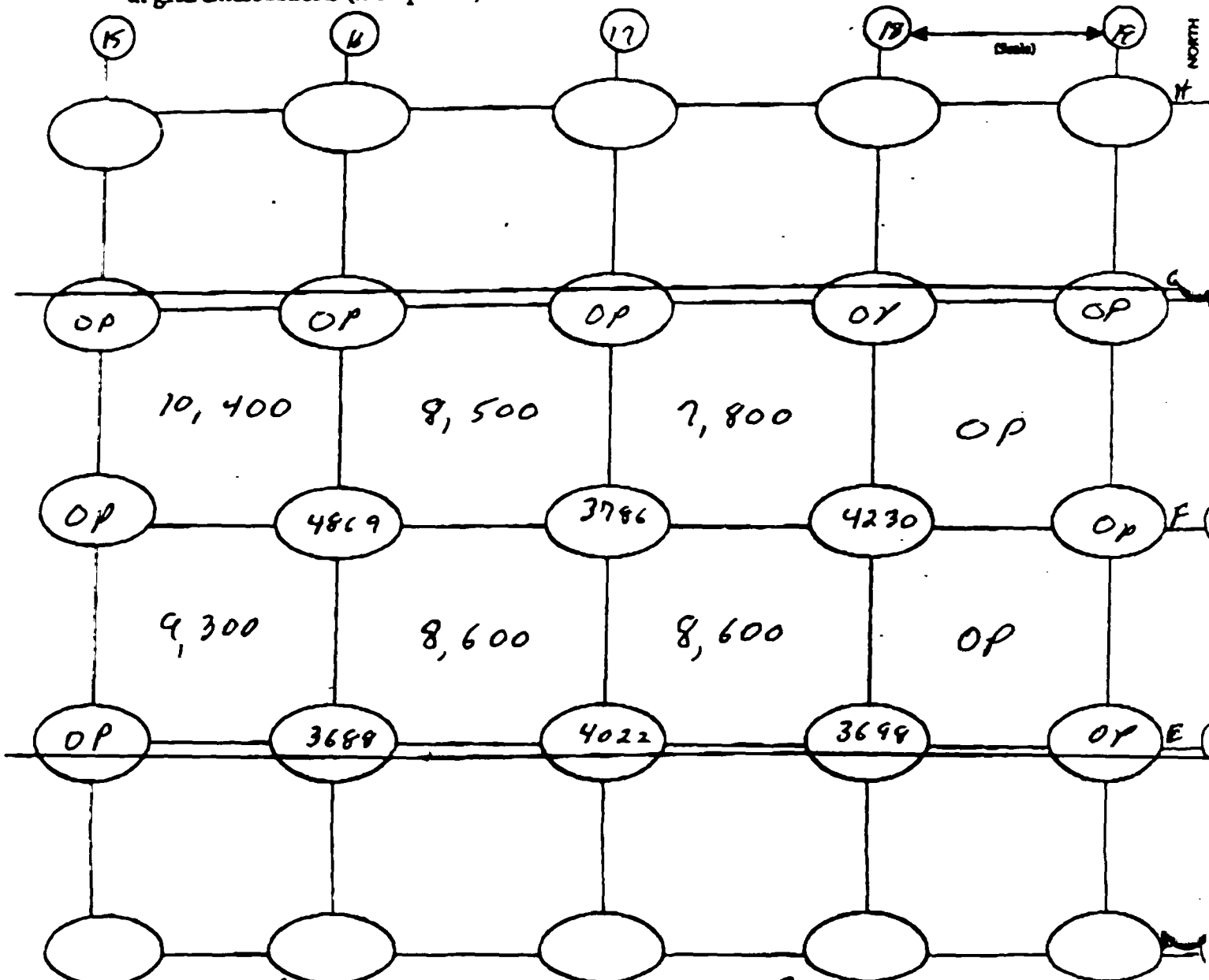
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 4A - 8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP Other Page
Exclusion zone boundary NE Not excavated SL Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 3

Date 8-12-02

Technician I D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

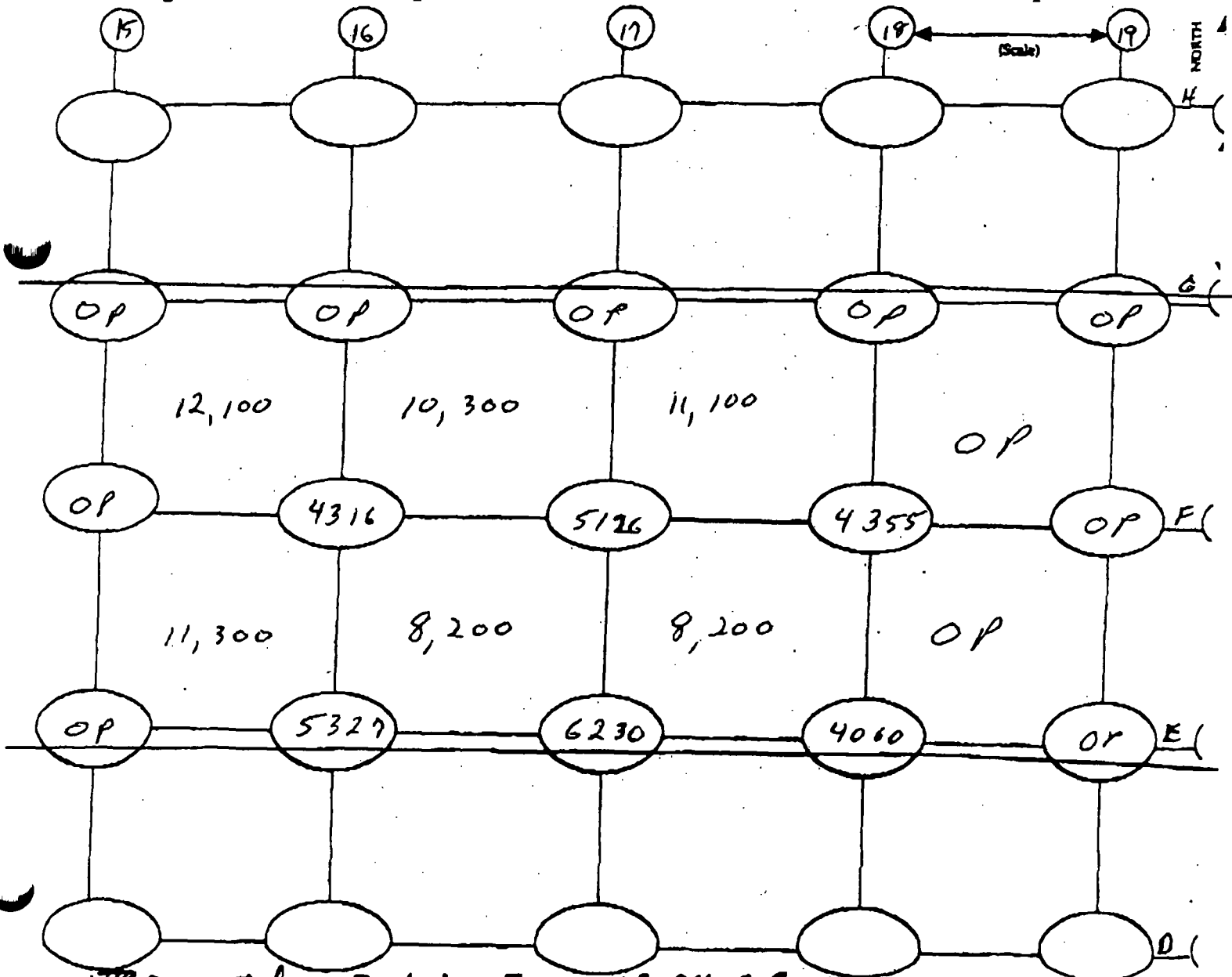
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 44-84 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass

* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Corporation, Ltd.

Project # 25585-XI

Project Name GMO

Page 1 of 5

Date 8-17-02

Technician L D Smith
meter # 126496 Probe # 168143

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

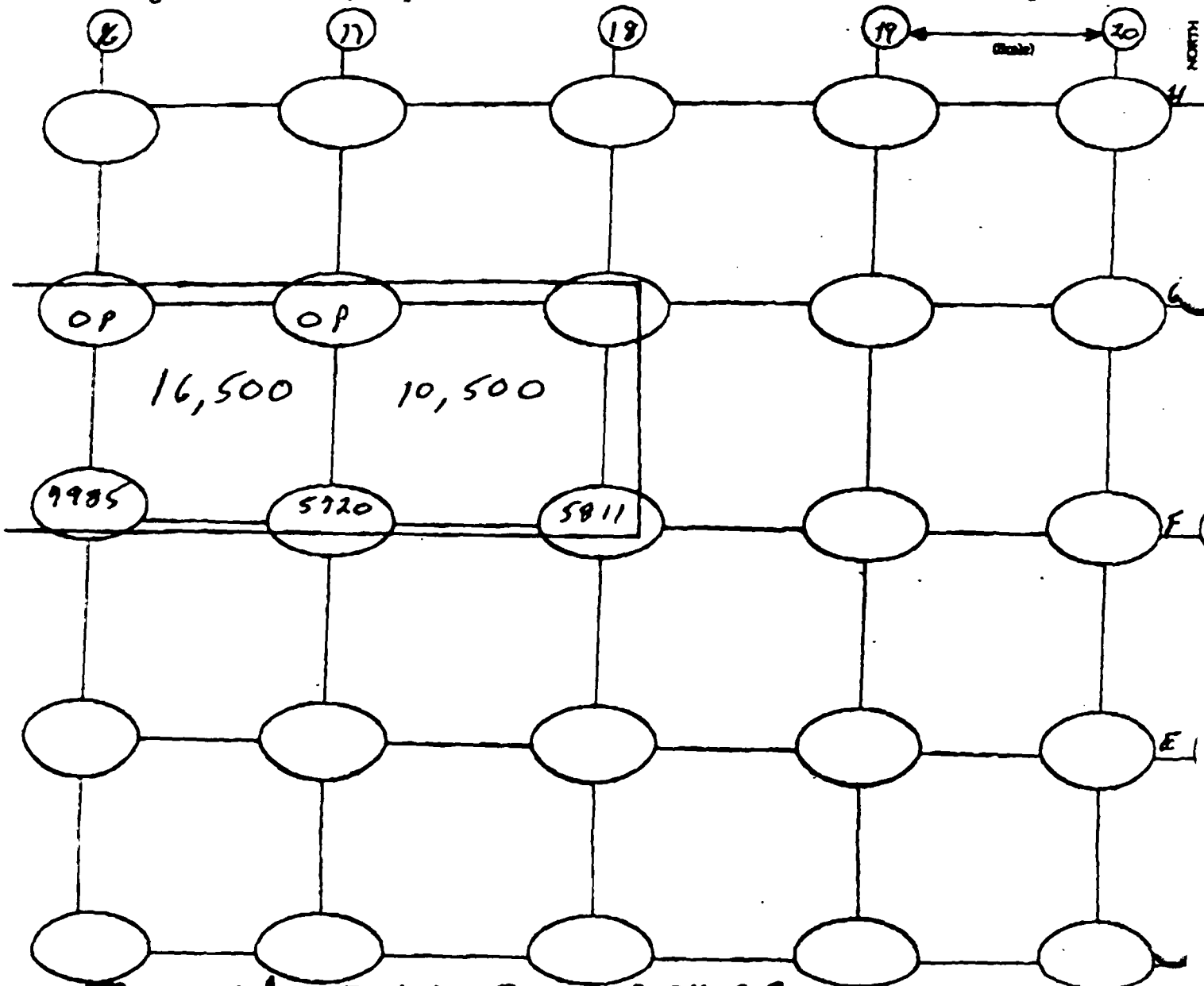
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation -3'

Background 4h-8h cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP, OMR Pass
SL - Exclusion zone boundary NE = Not excluded SL = Slope

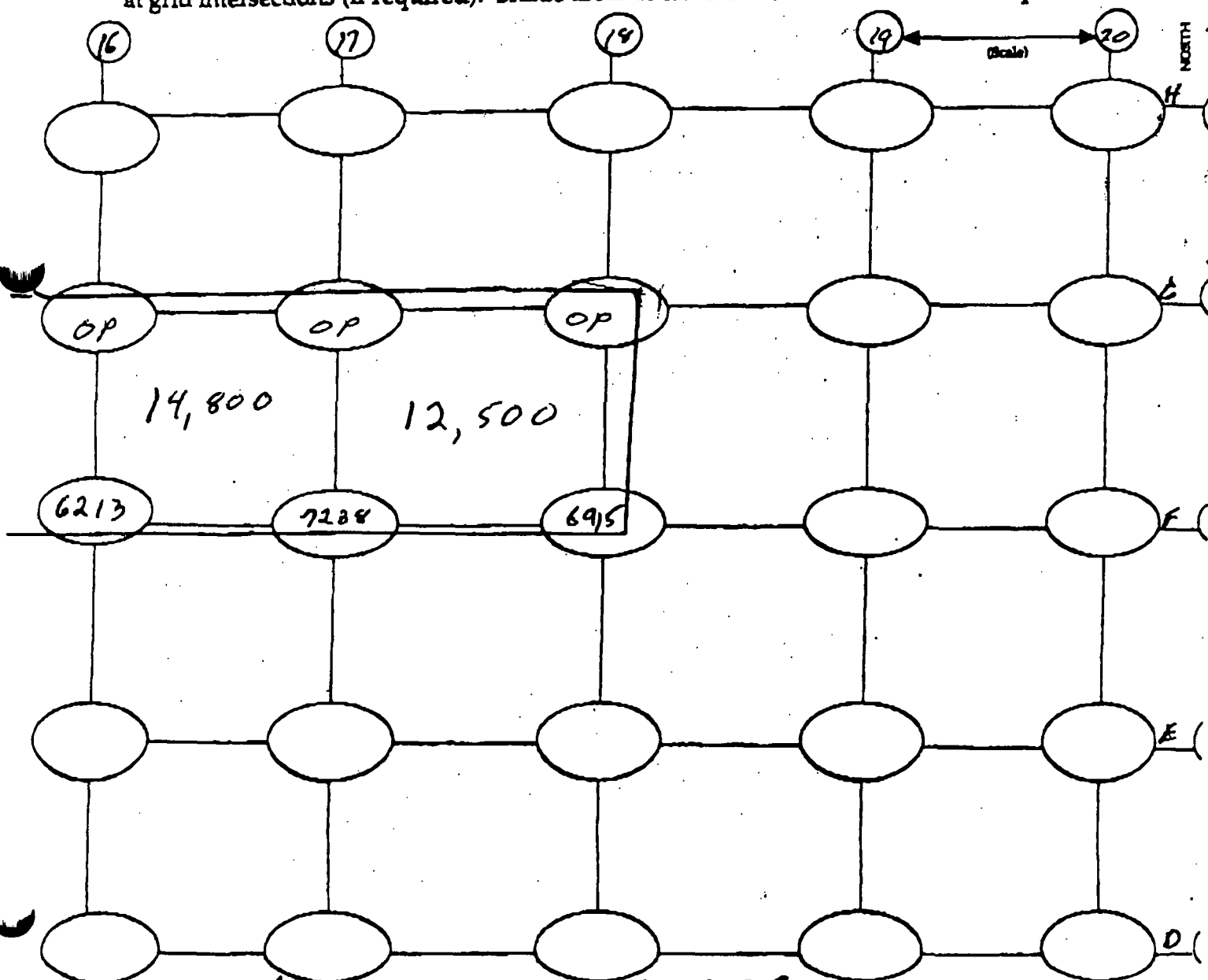


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 2 of 5Date 8-17-02Technician L O SmithInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI 2"x2" NaI
Shielded Not ShieldedLift Elevation -4-5'Background 4k-8k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, other page
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-KI Project Name GMO Page 3 of 5

STS Consultants, Ltd.

Date 8-14-02

Technician LD Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

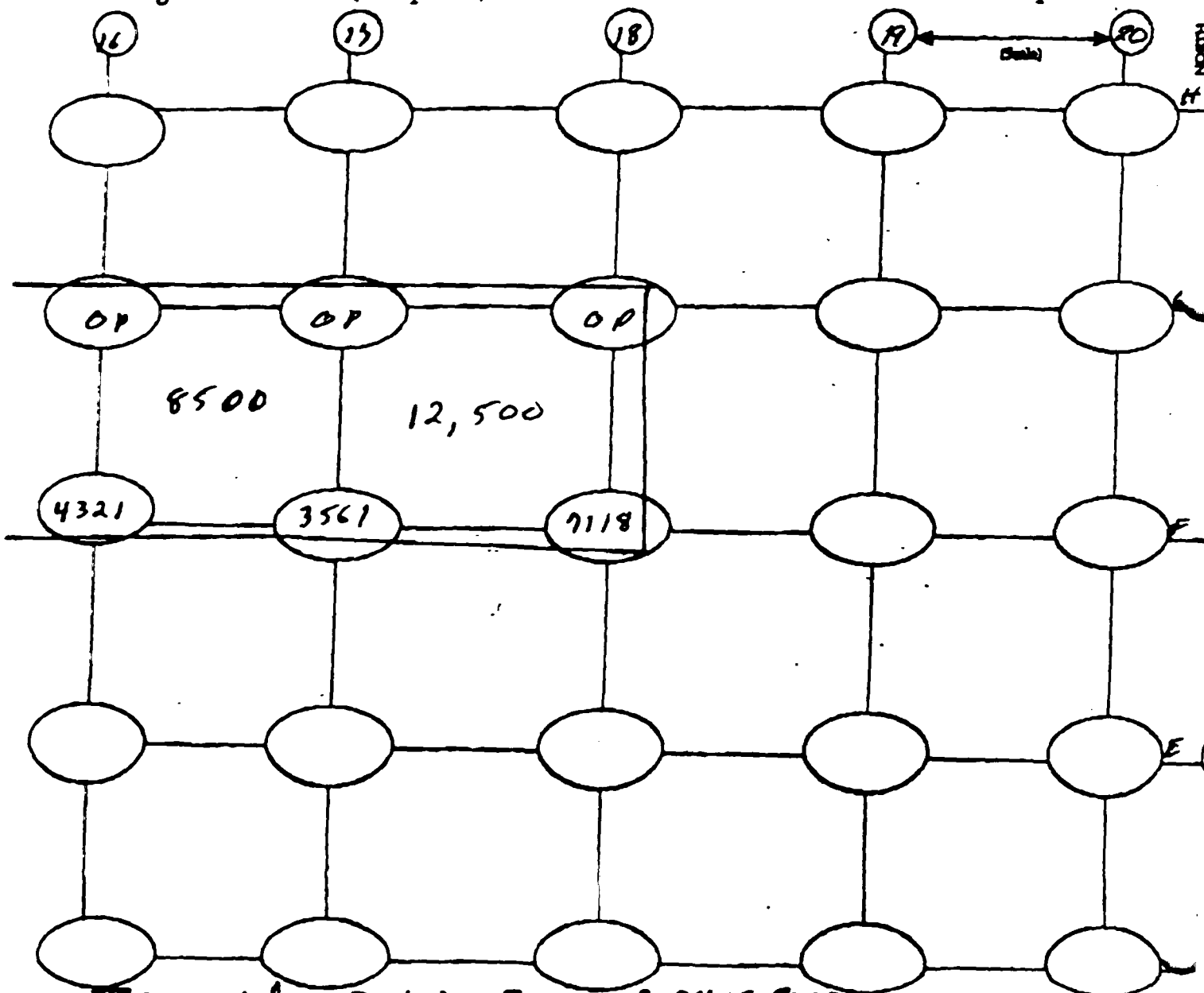
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 44-86 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Omer Page
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STC Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 4 of 5

Date 8-17-02

Technician LD Smith

Inst. Model Ludlum 2221

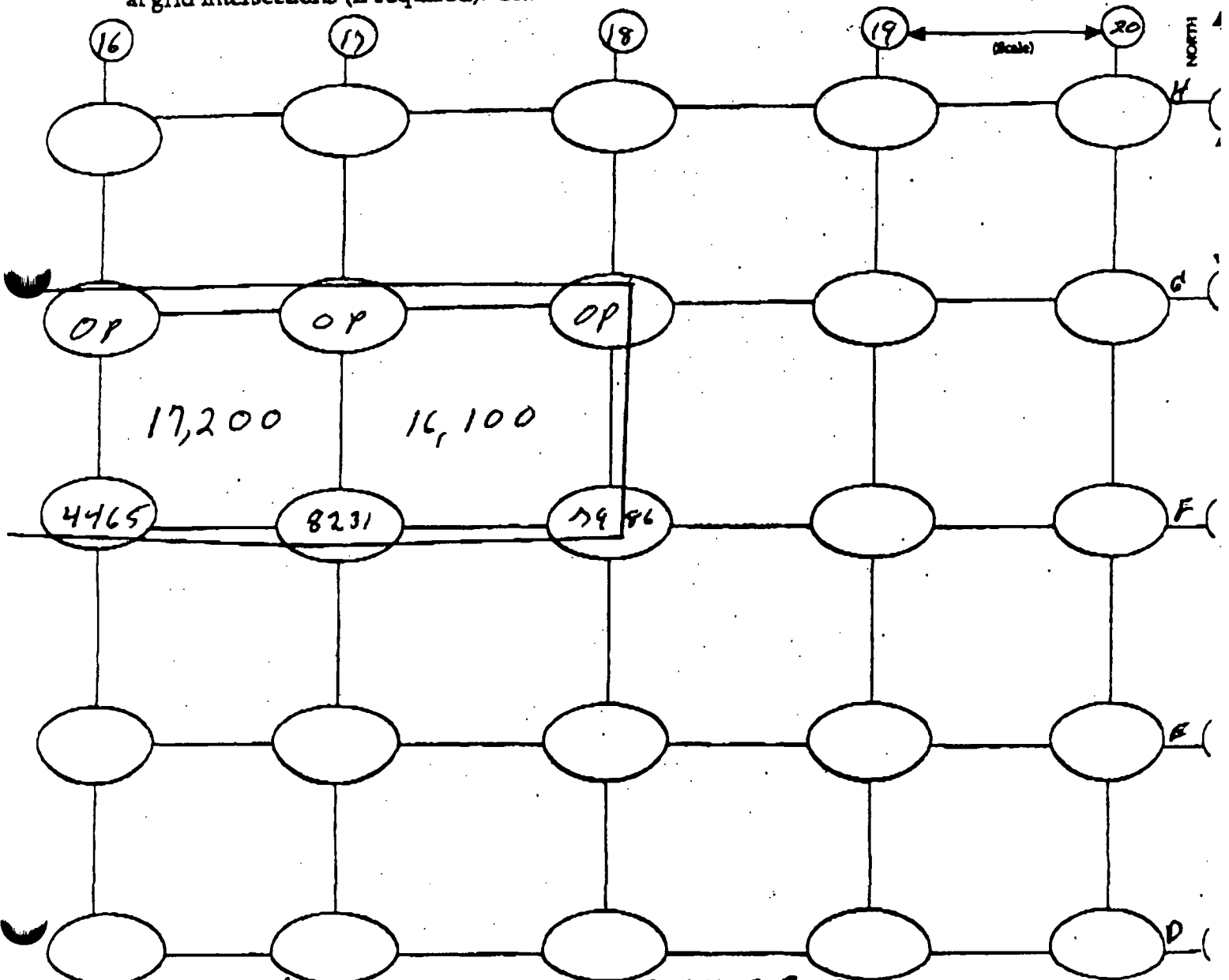
meter # 126496 Probe # 168143

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 44-8k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP & other face
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 5 of 5

Date 8-14-02

Technician L O Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

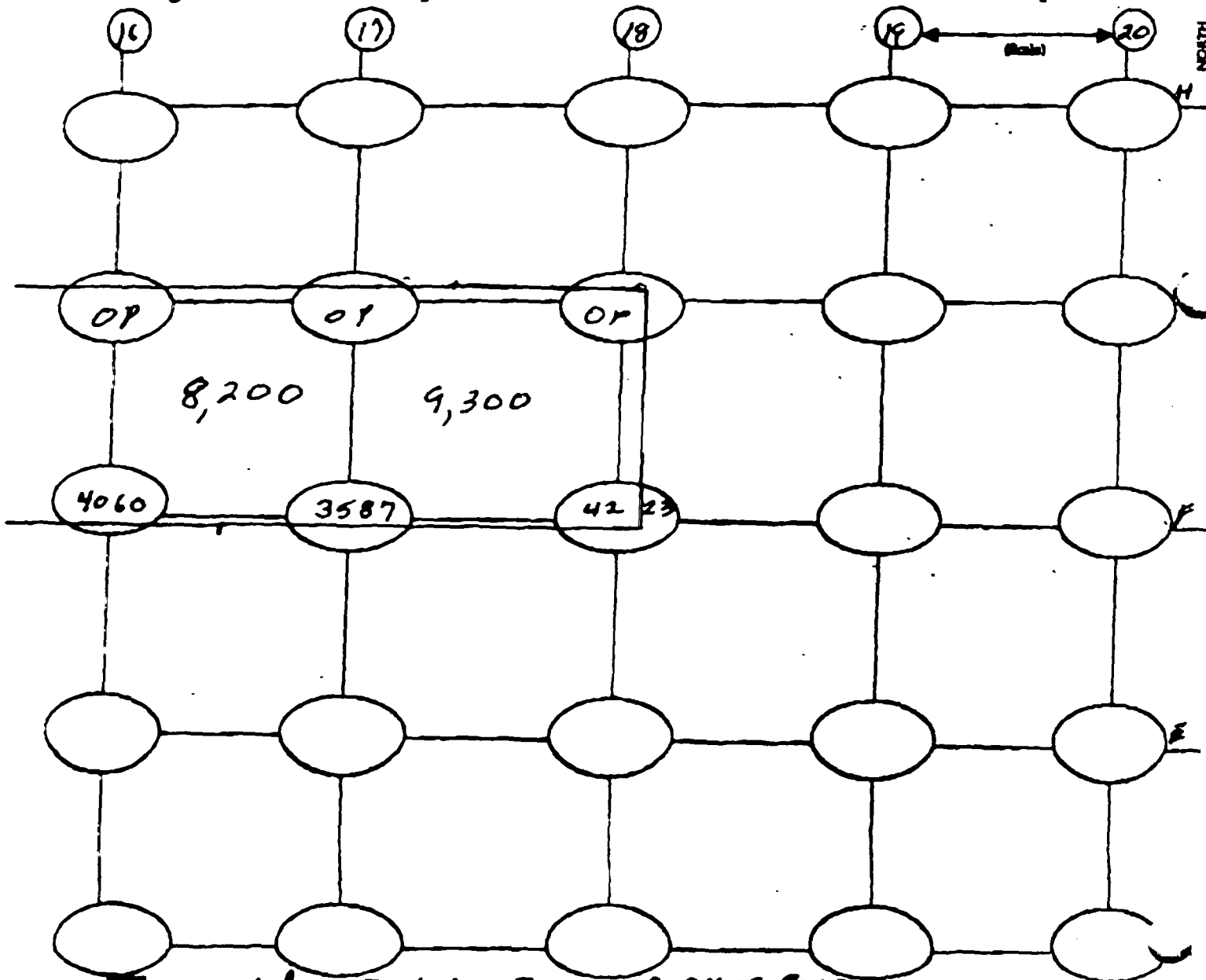
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -8.5'

Background 4k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Omer Pass
Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 8

Date 8-15-02

Technician I O Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

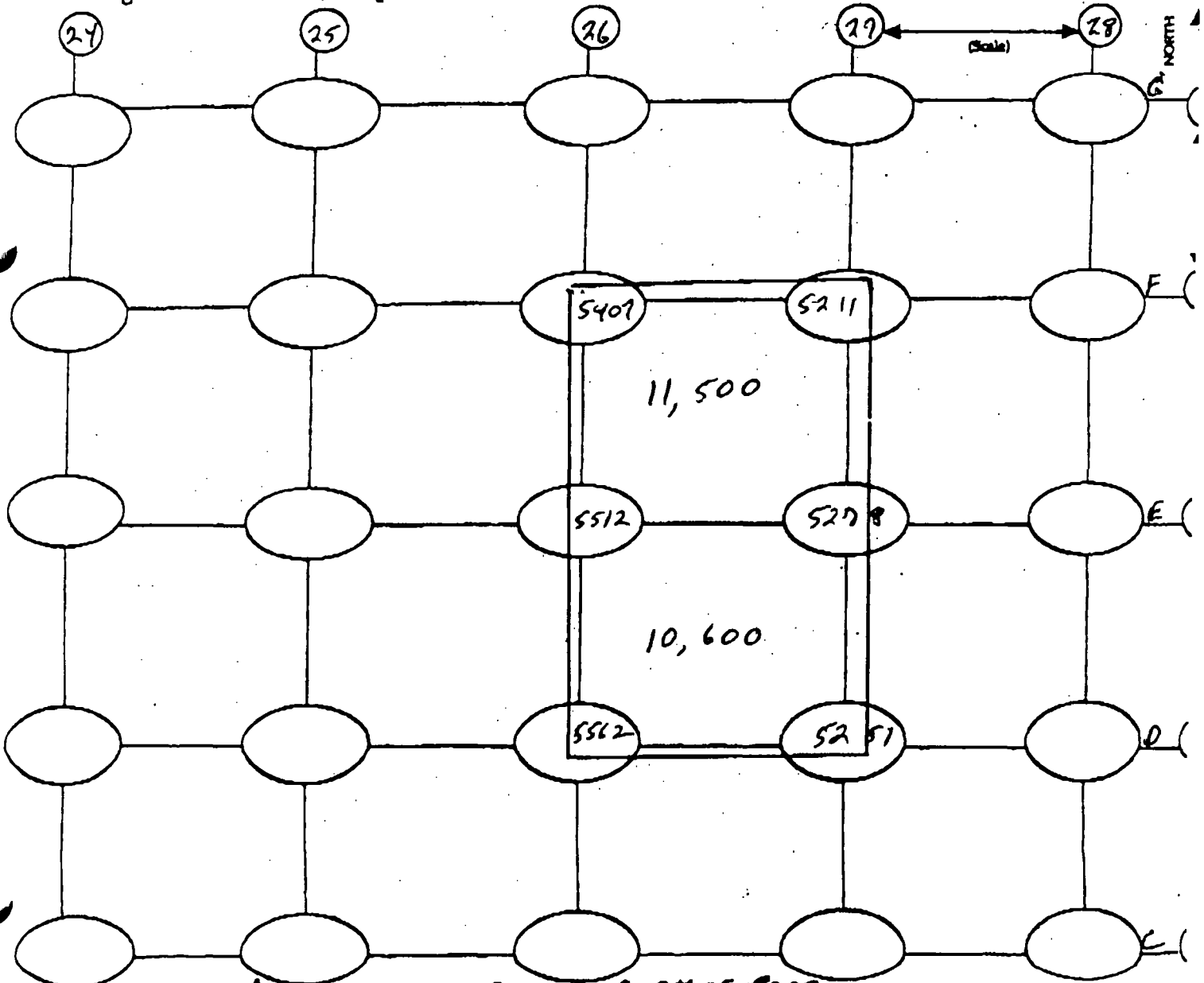
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation Surface

Background 64-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Pass
* = Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 8

STS Consultants, Ltd.

Date 8-15-02

Technician LO Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

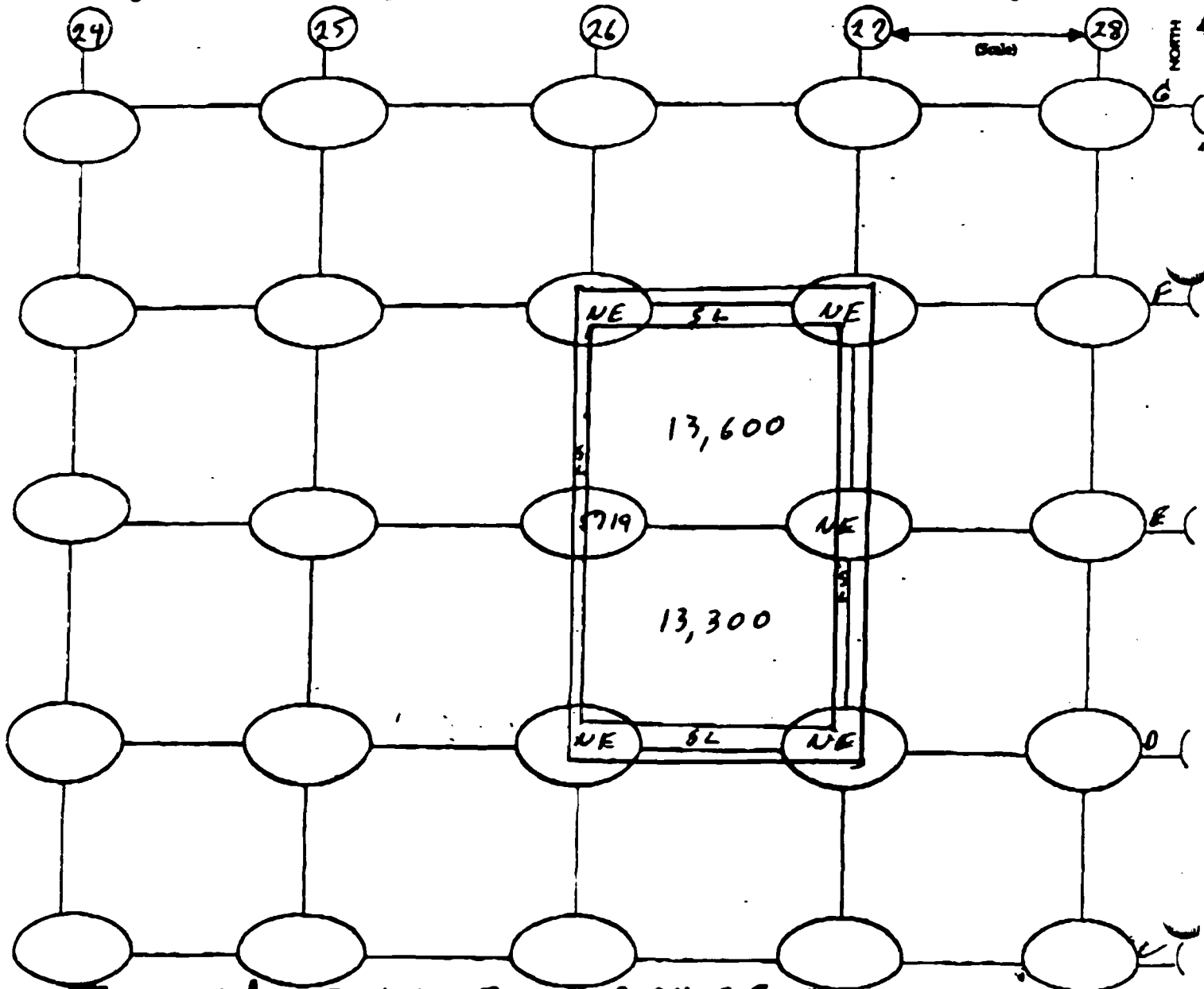
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Shielded / Not Shielded

Lift Elevation -1.5'

Background 6K - 10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other page
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 8

Date 8-15-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

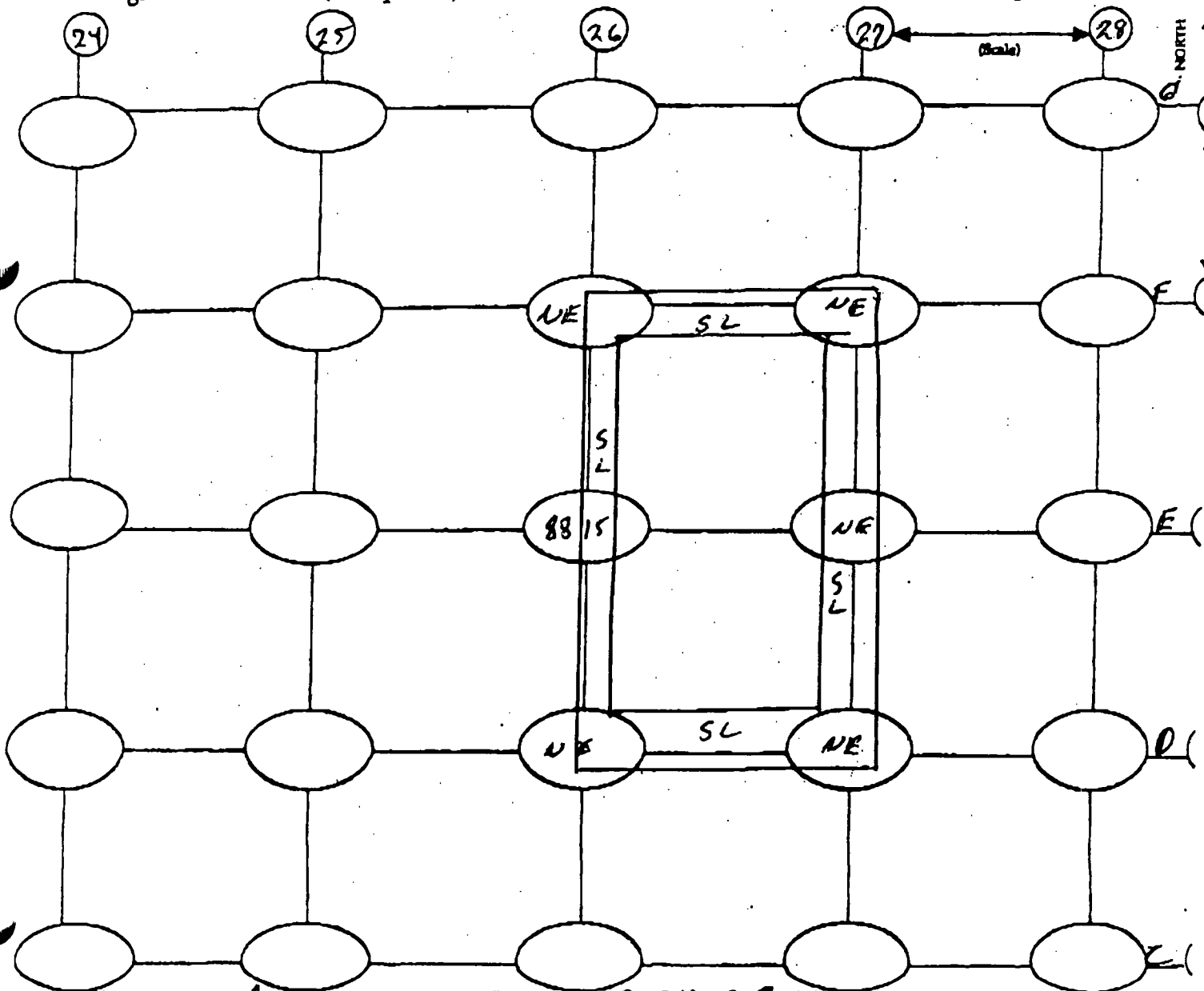
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 6k-10k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
*** = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants Ltd.

Project # 25585-XI Project Name GMO Page 4 of 8

Date 8-15-02

Technician I O Smith
meters *Probe #*

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

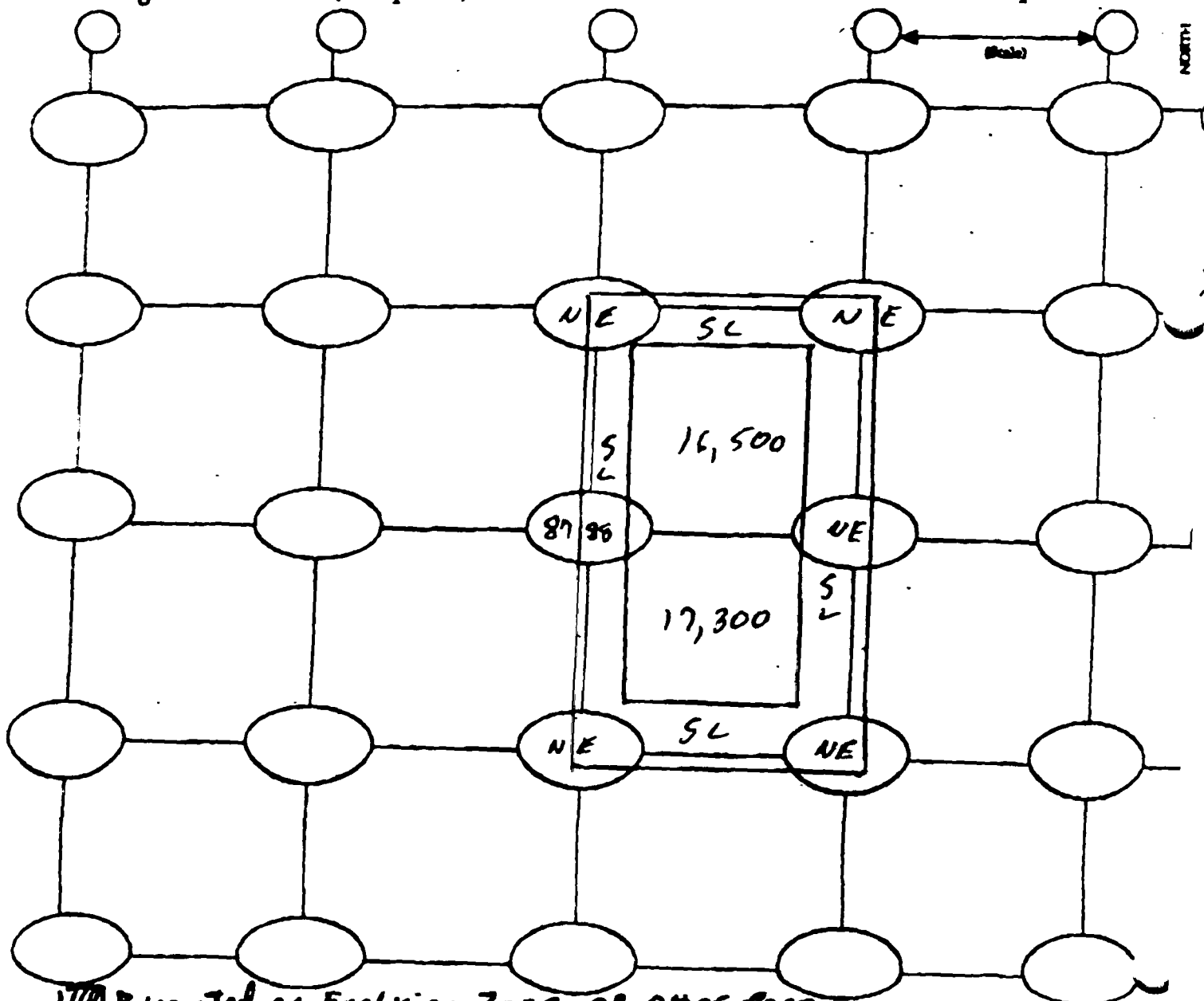
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 64-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone or other use
* = Exclusion zone boundary NE = Not examined SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 5 of 8

Date

8-15-02

Technician

I D Smith

Inst. Model

Ludlum 2221

Serial No.

meter #

Probe #

126496

168193

Probe Type:

1"x1" NaI

2"x2" NaI

Shielded

Not Shielded

Lift Elevation

-6'

Background

6.8-10k

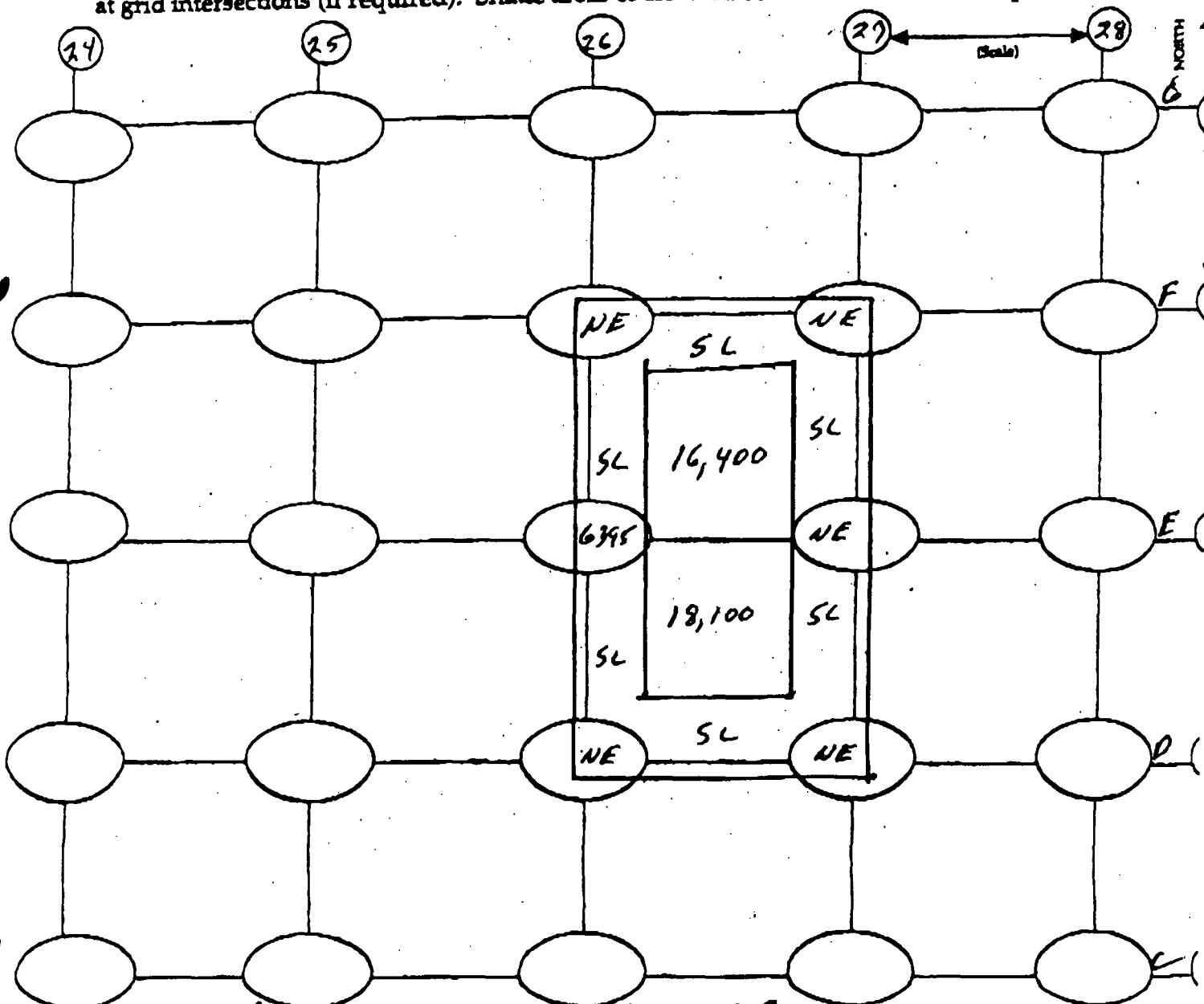
cpm

Action Level

20,680

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Omar Pass
* * = Exclusion zone boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 6 of 8

Date 8-15-02

Technician J D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

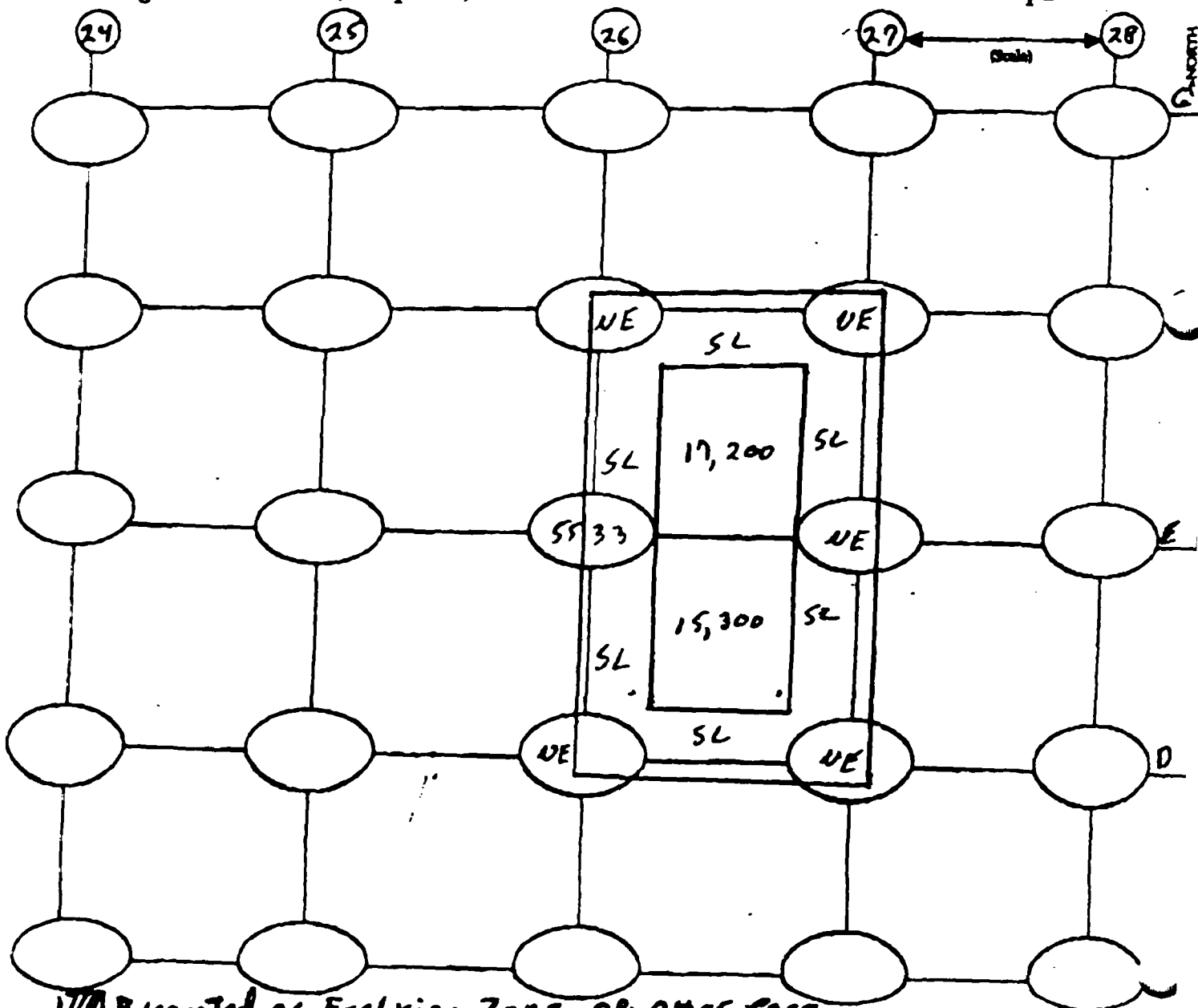
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 6k-10k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone or other use

= Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 7 of 8

Date 8-15-02

Technician L. D. Smith
meter # Probe #

Inst. Model Ludlum 2221

Serial No.

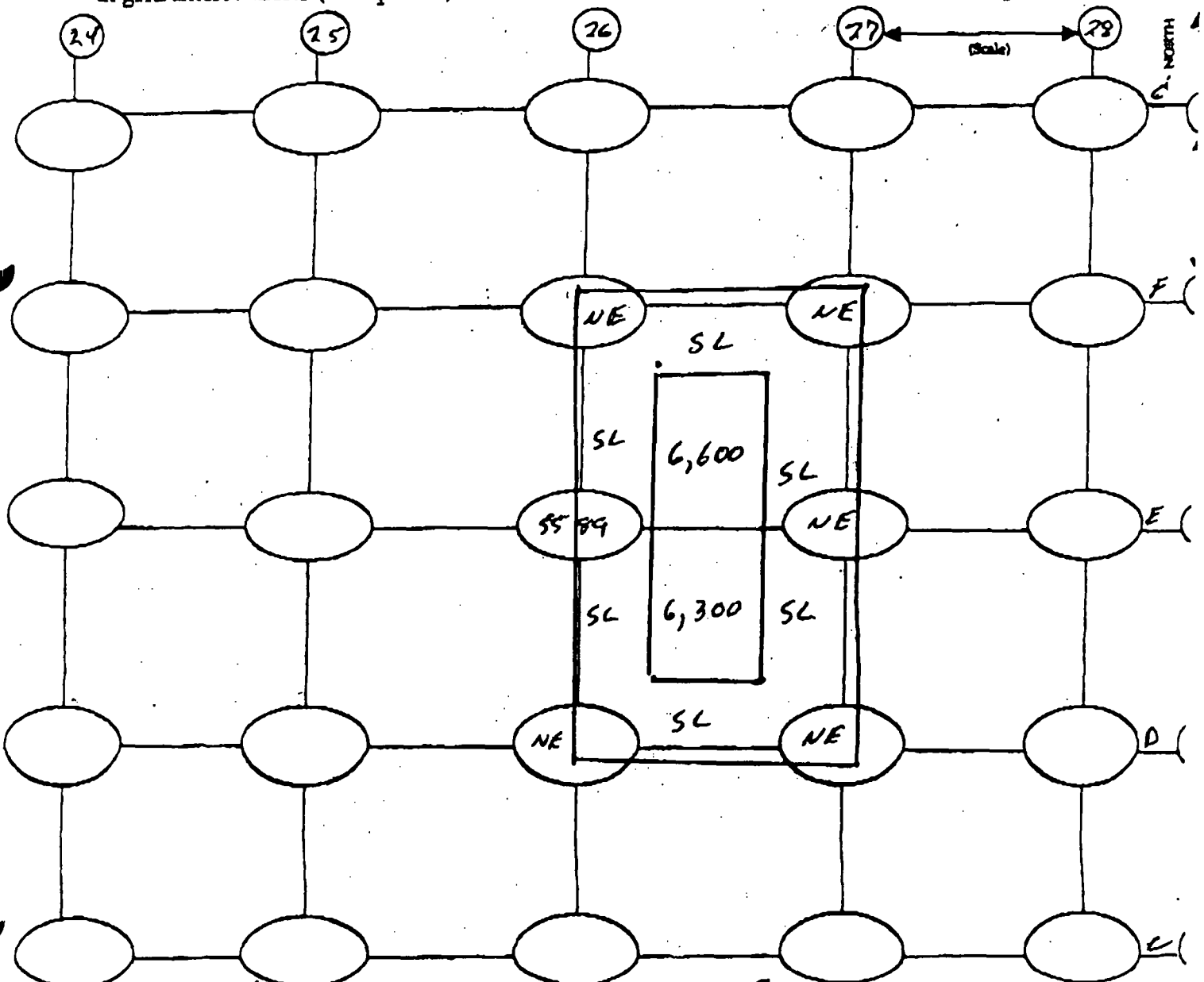
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded


Lift Elevation -9'

Background 6K-10K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone on other page
x = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 8 of 8

STS Consultants, Ltd.

Date 8-15-02

Technician J D Smith

Inst. Model Ludlum 2221

meter # 126456 Probe # 168143

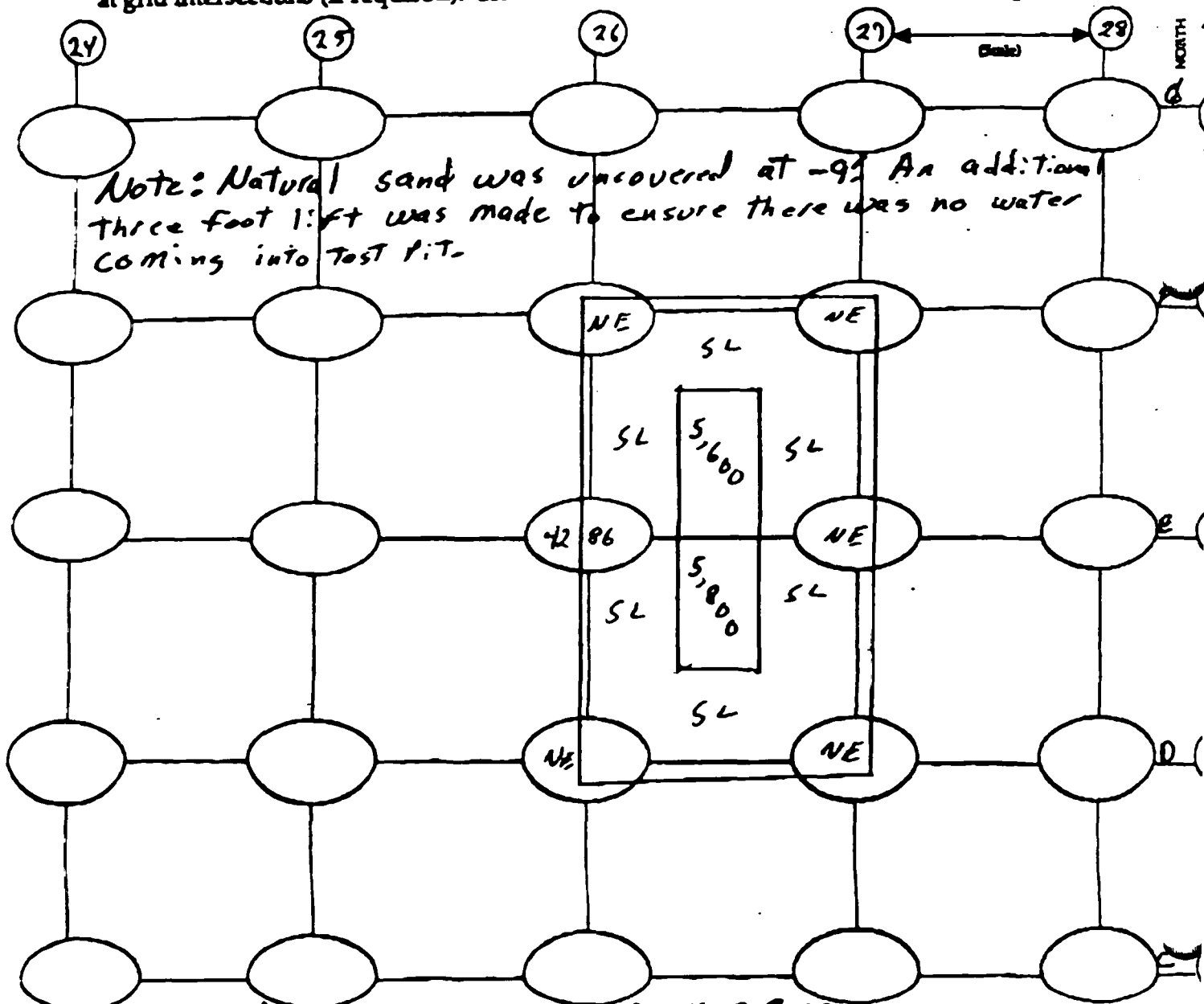
Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded ☒ Not Shielded

Lift Elevation -12'

Background 6.4 - 10.4 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone Ops over Pass
SL = Exclusion zone boundary NE = Not excavated SL = Slope

Instrument not used



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 8-15-02

Technician L O Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

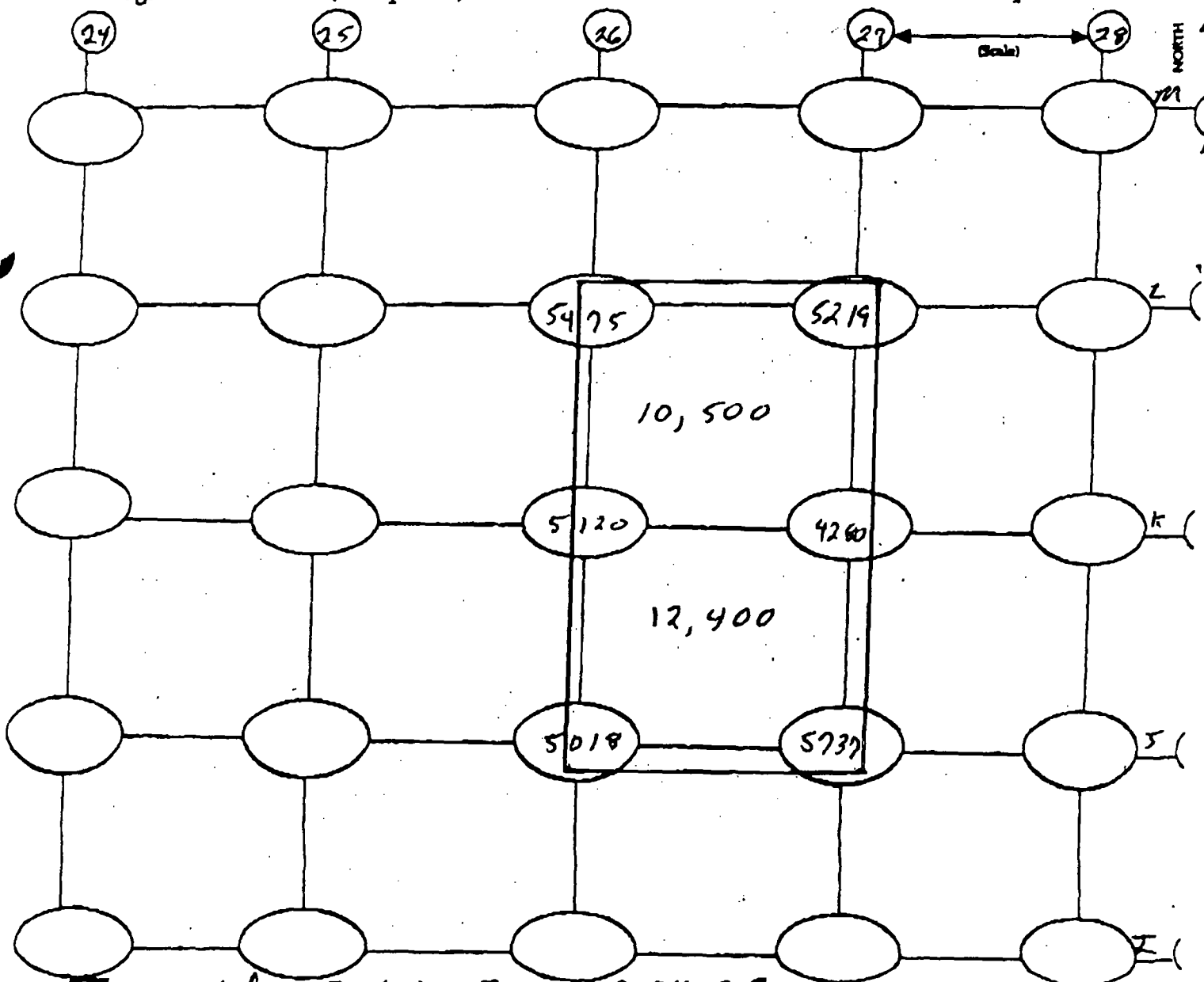
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 44 ± 104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
* - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 8-15-02

Technician meters Probe 3

Inst. Model Ludlum 2221

Serial No. 126496 168143

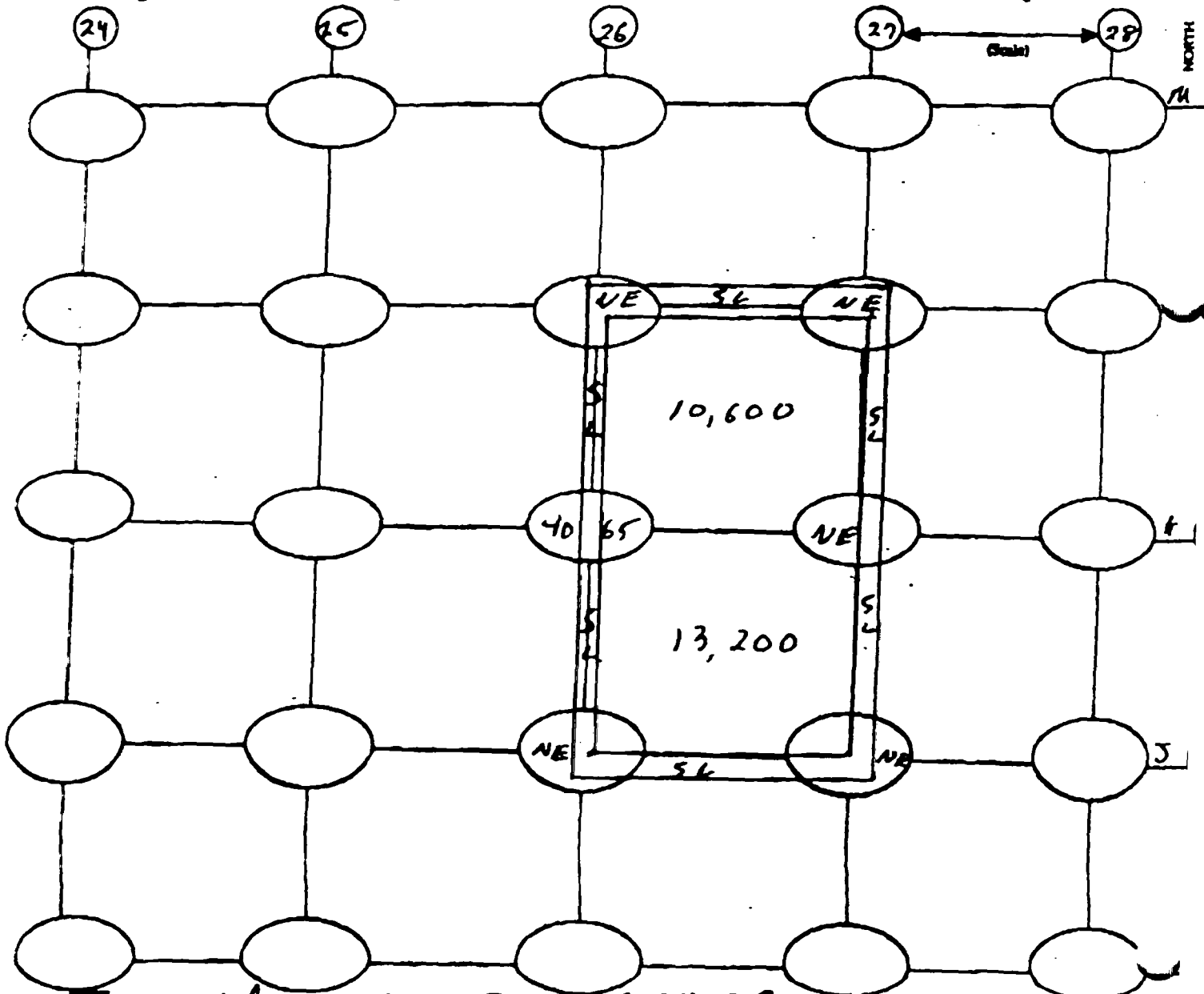
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 44-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP. Other Page
SL = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 6

STS Consultants, Ltd.

Date 8-15-02

Technician L O Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

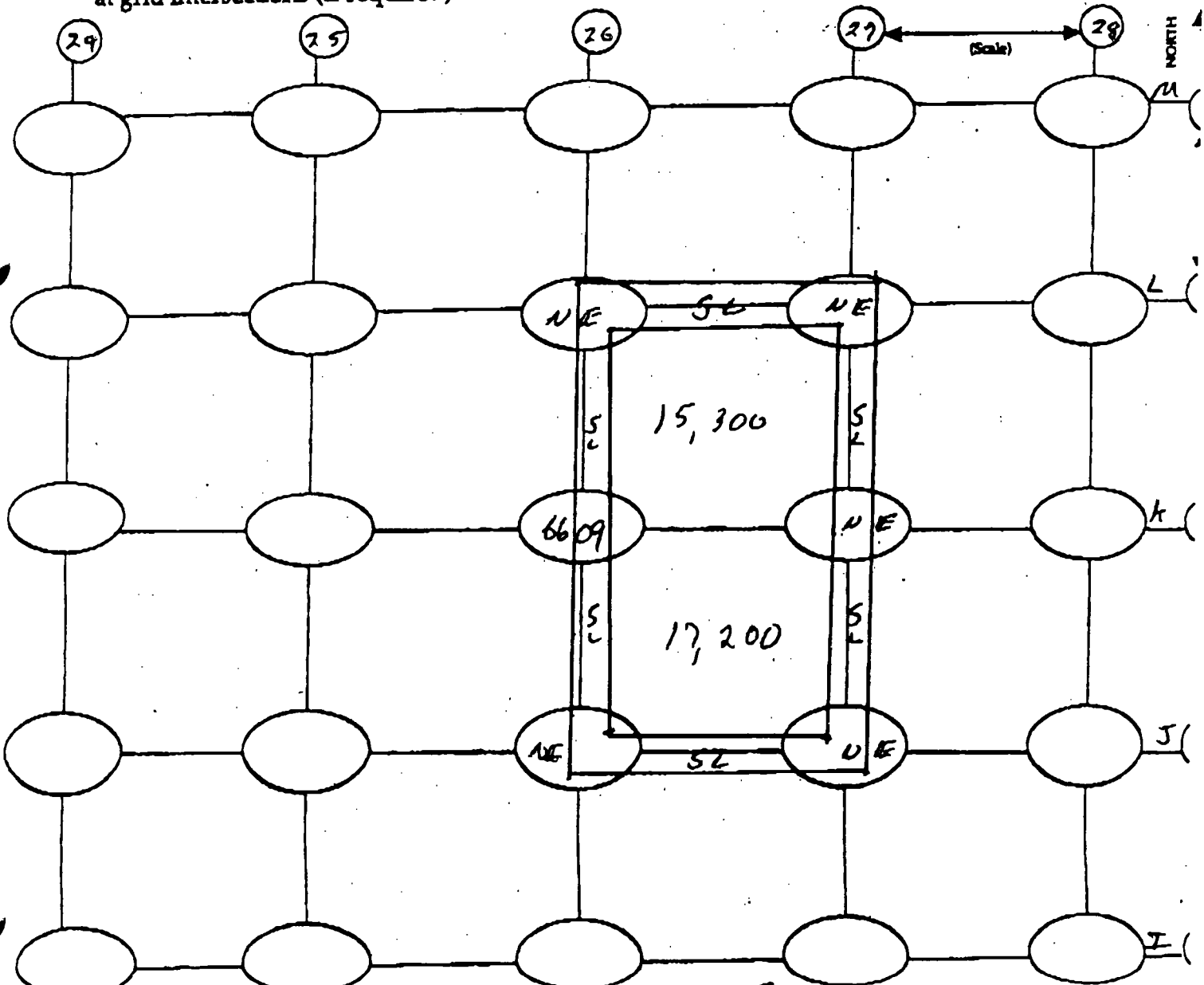
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation 15' - 3' ^{LOA} _{W.A.O.C}

Background 4.8 - 10.8 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Omer Pass
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 8-15-02

Technician IDA

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

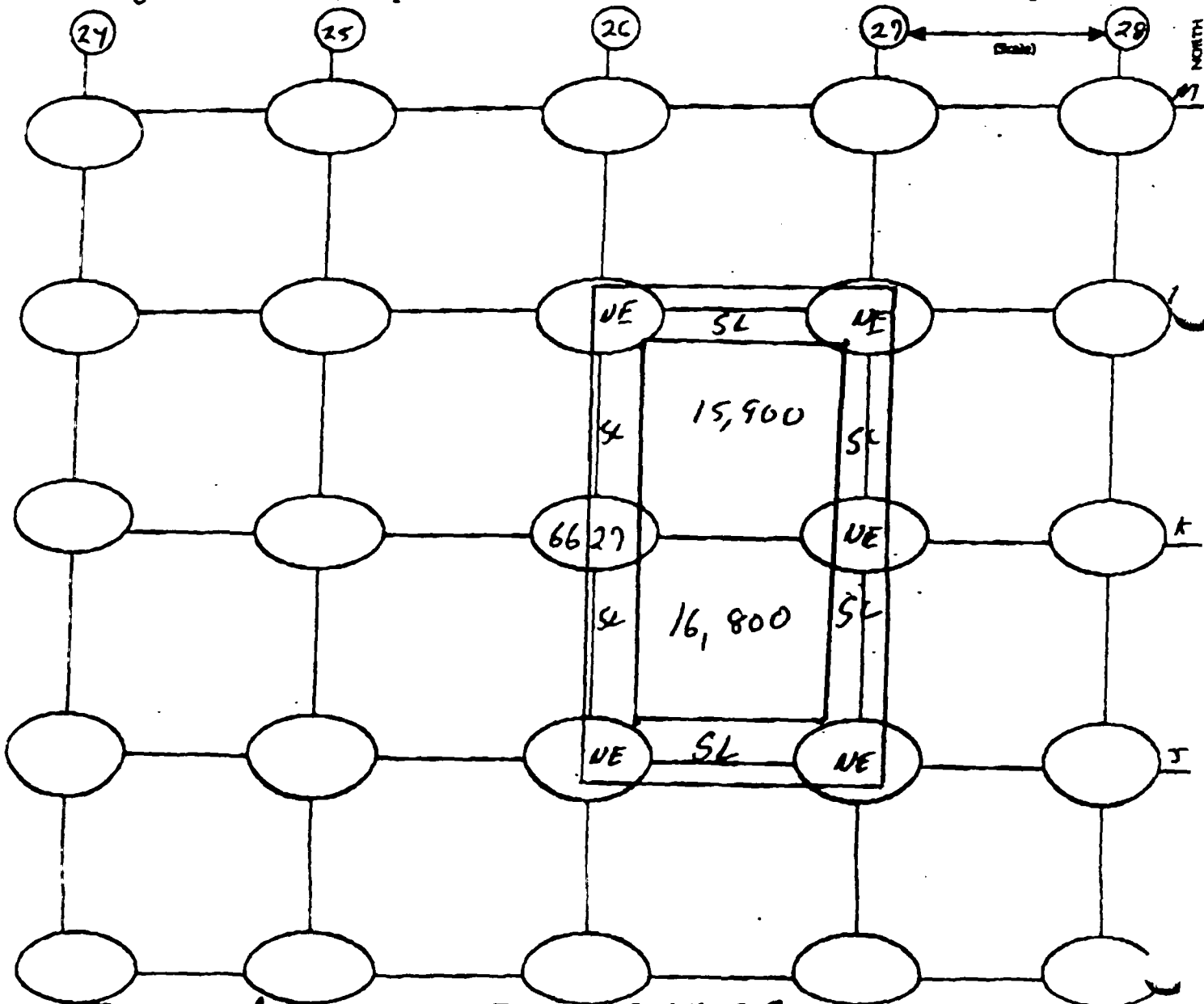
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 4 A-10A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
 Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 5 of 6

Date 8-15-02

Technician J D Smith

Inst. Model Ludlum 2221

Serial No. meter # 126496 / Probe # 168143

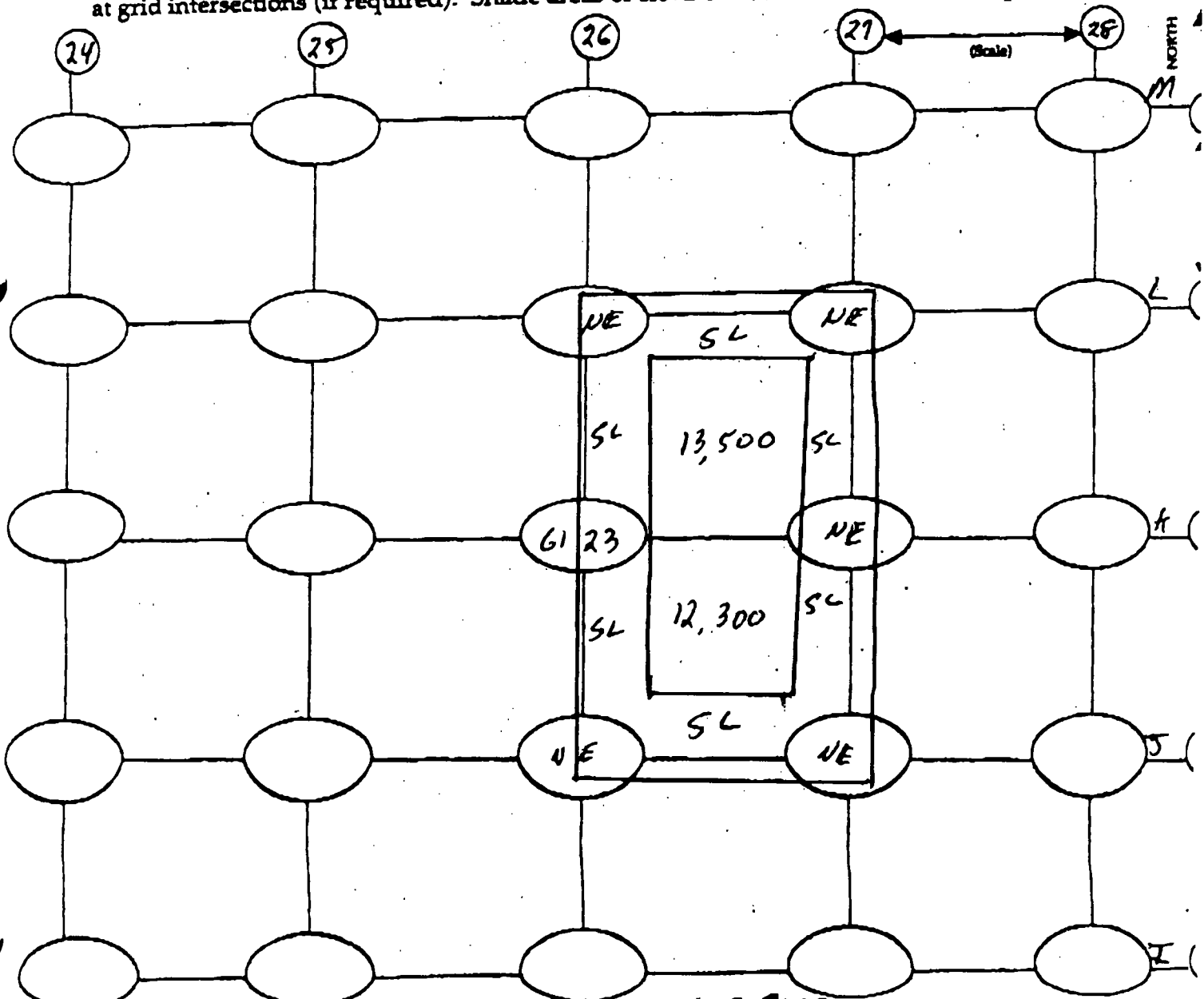
Probe Type: 1'x1" Nal / 2'x2" Nal
Shielded / Not Shielded

Lift Elevation -6'

Background 44-104 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OR other use
 = Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

Date 8-15-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126456 / 168143

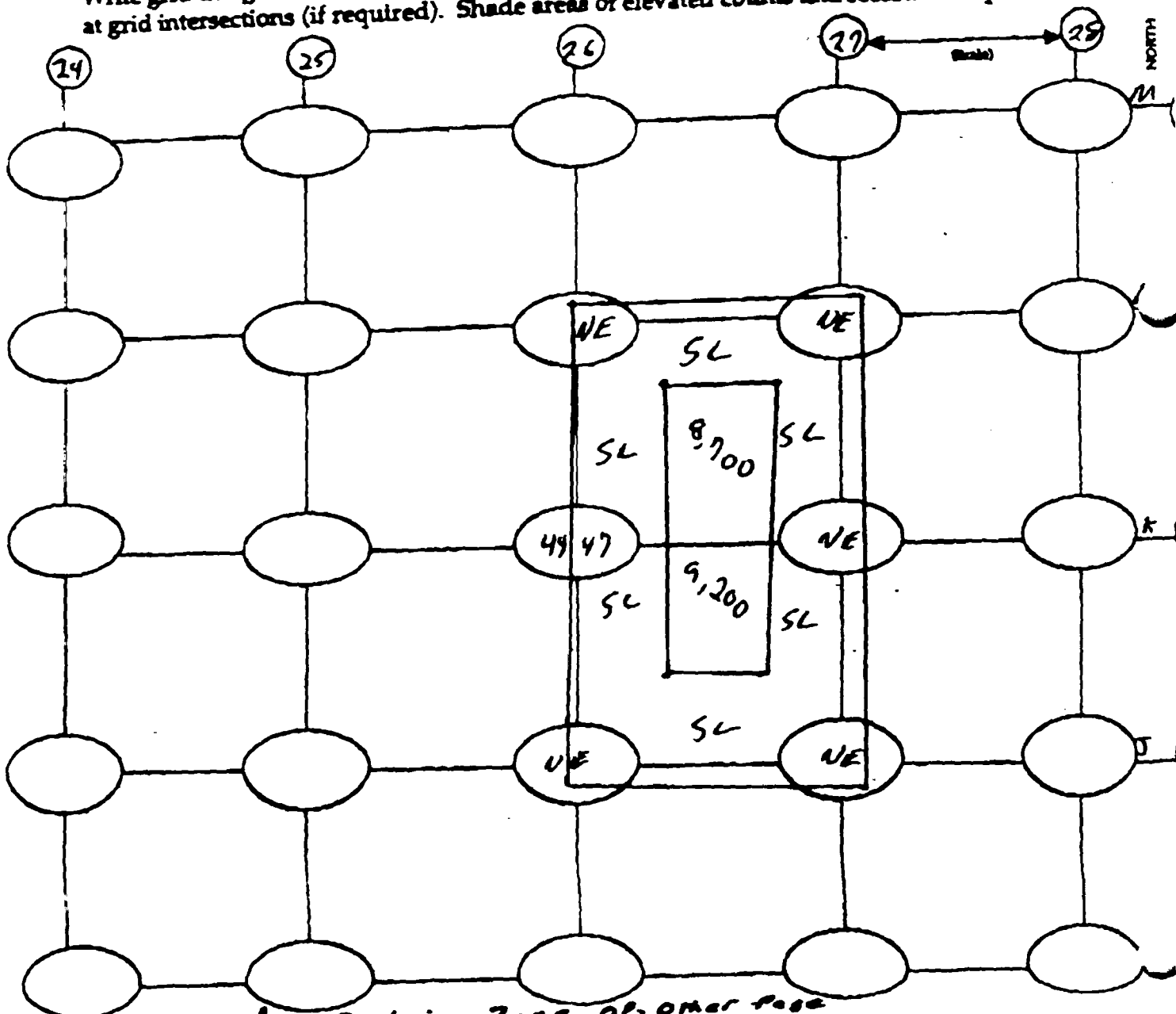
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 4k-10k cpm

Action Level 20,860 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other phase
 Exclusion zone boundary NE = Not excavated SL = Slope

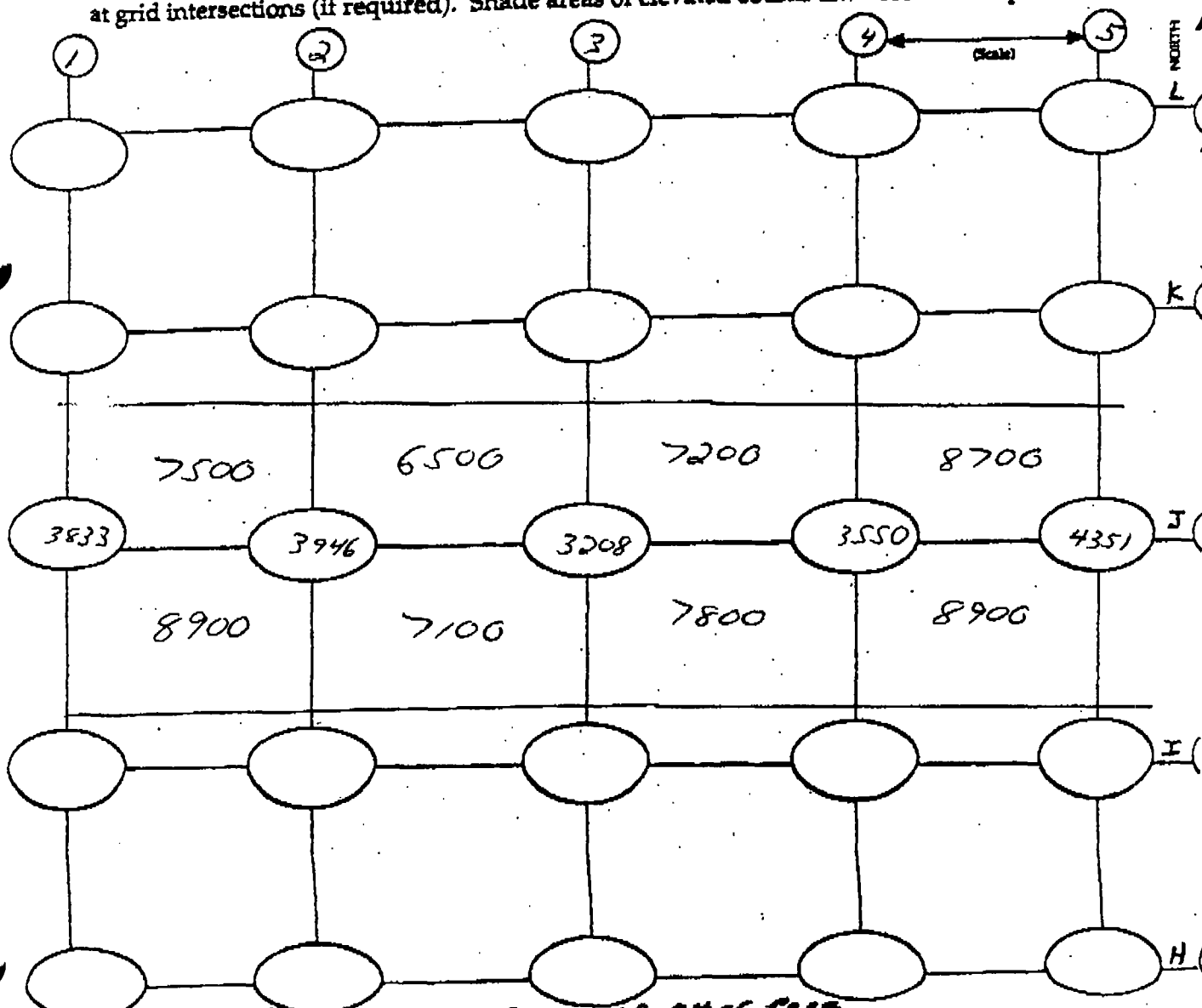


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 1 of 12Date 8/22/02Technician Glenn HuberInst. Model Ludlum 2221meter # Probe 2
Serial No. 126496 AP 168143Probe Type: 1'x1" NaI 2"x2" NaI
Shielded Not ShieldedLift Elevation SurfaceBackground 4k-8k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OPs over pass
 - - - - - Exclusion zone boundary NE = Not excavated SL = Slope

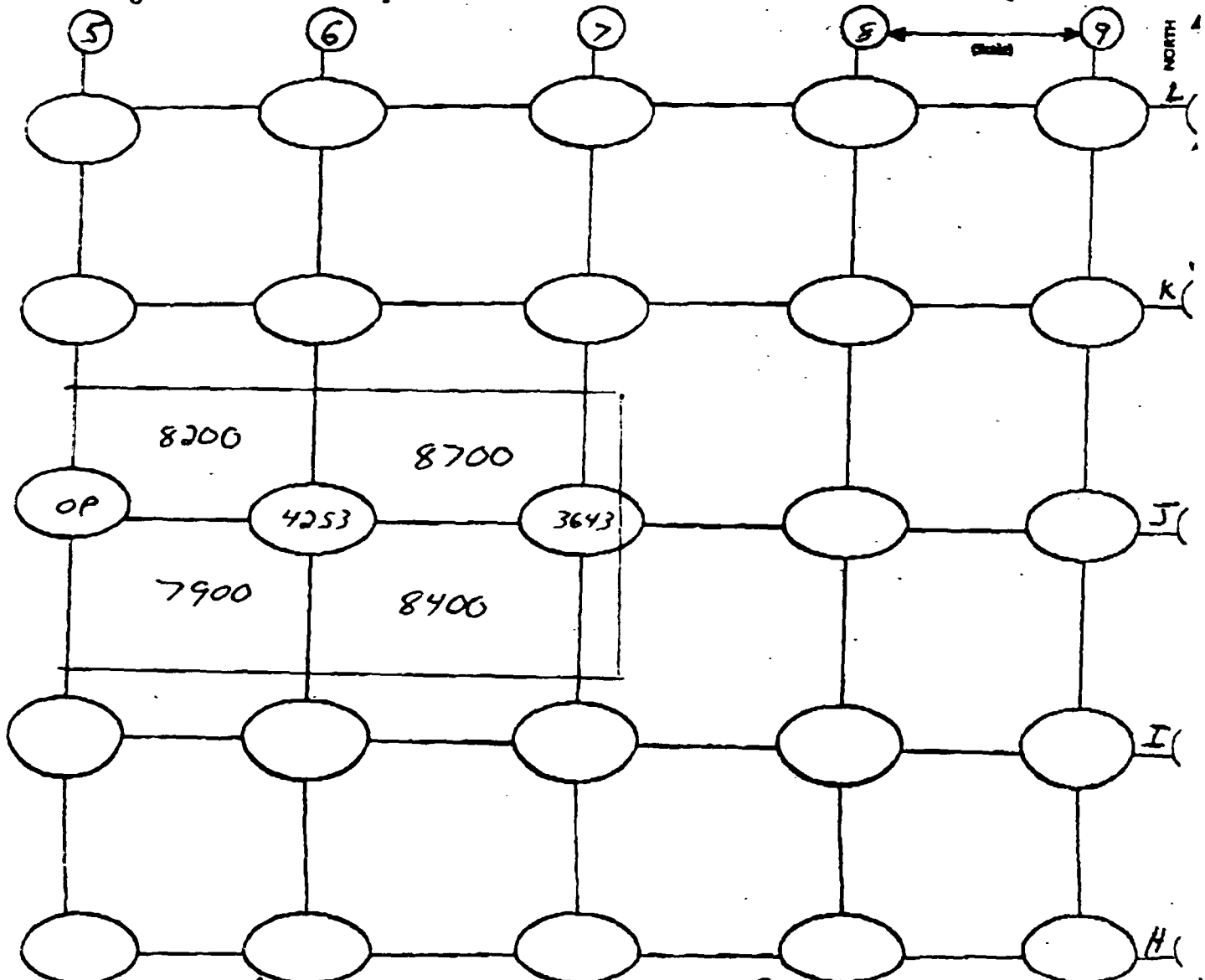


RADIATION SURVEY FORM

STS Consultants Ltd.

Project # 25585-XIProject Name GMO Page 2 of 12Date 8/22/02Technician Glen HuberInst. Model Ludlum 2221Meter # Probe #
Serial No. 126496 PR165143Probe Type: 1"x1" NaI / 4"x2" NaI
Shielded (Not Shielded)Lift Elevation surfaceBackground 4k-8k cpmAction Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Phase
 NE=Not excavated SL=Slope

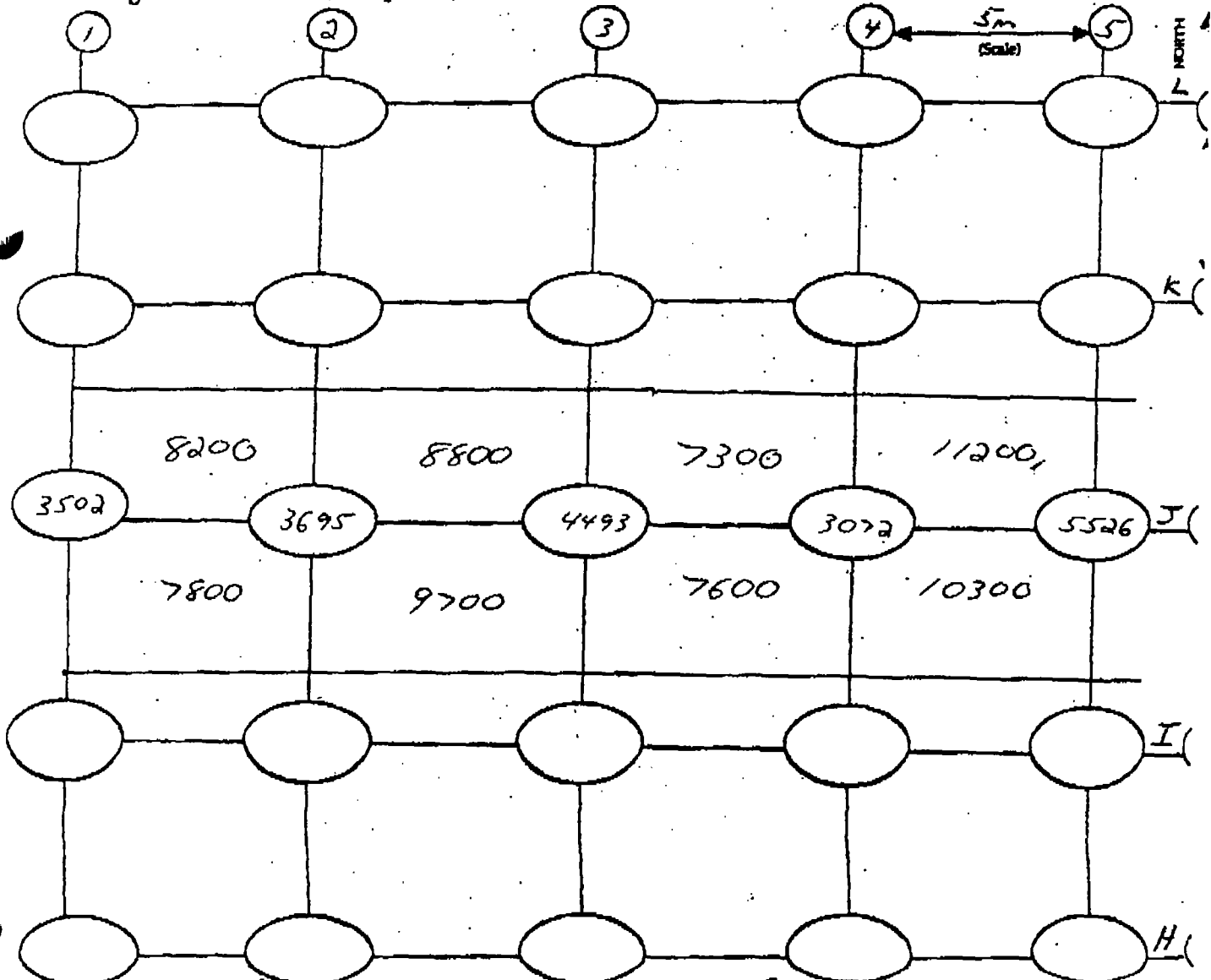


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 12Date 8/22/02Technician Glen HyberInst. Model Ludlum 2221meter # Probe #
Serial No. 126496 PR168143Probe Type: 1'x1'Nal / 2'x2'Nal
Shielded Not ShieldedLift Elevation -1.5'Background 4A-8A cpm. Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone Operator Page
 hatched area = exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

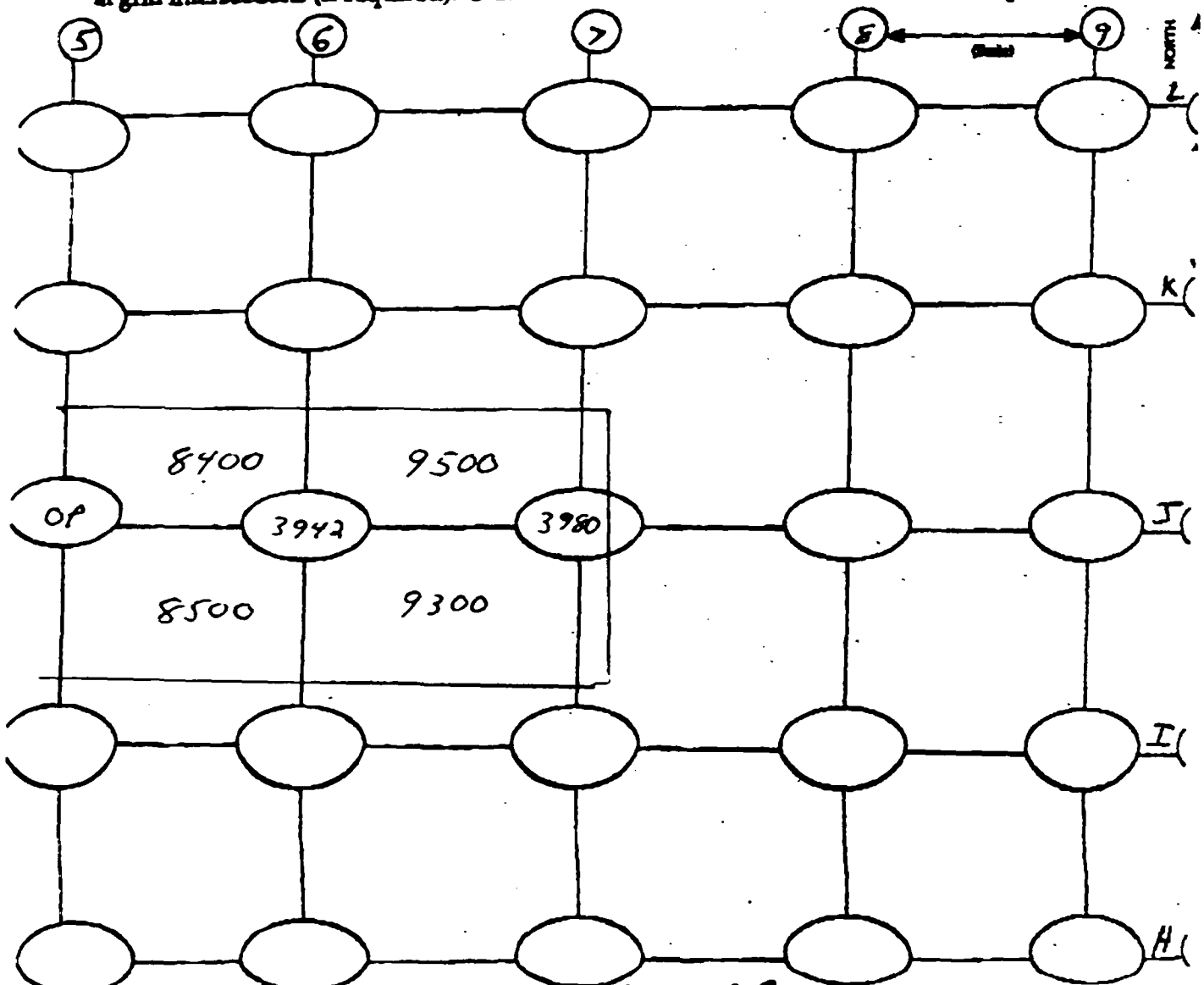
 Project # 25585-XI Project Name GMO Page 4 of 12

STS Consultants, Ltd.

Date 8/22/02Technician Glen HuberInst. Model Ludlum 2221
 Serial No. 126496 / PR165143

 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded ☒ Not Shielded ☐
Lift Elevation -1.5'
 Background 4k-8k cpm Action Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.


 Excavated as Exclusion Zone OPs over Pass
 Boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

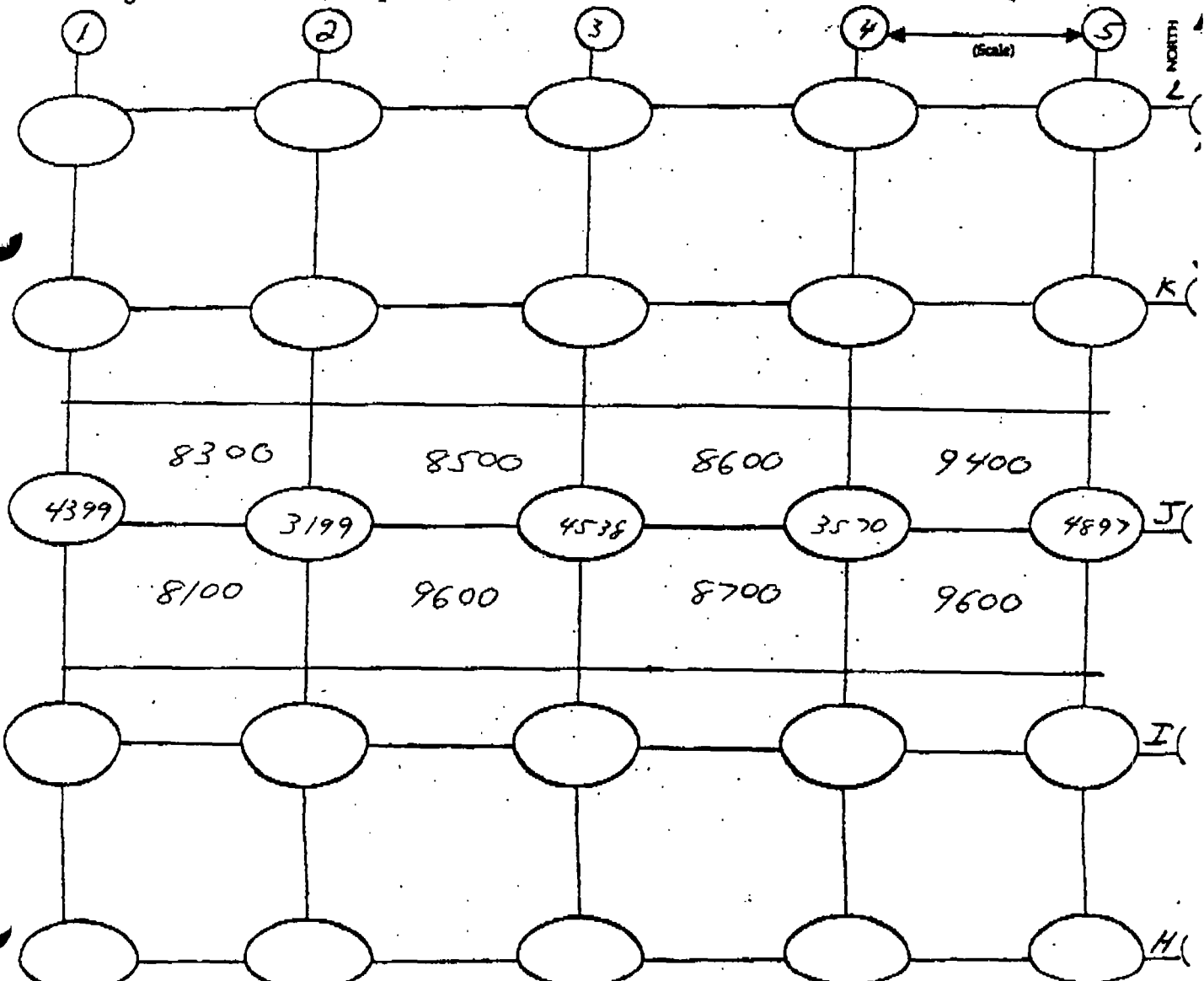
STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 12Date 8/22/02Technician Glen HuberInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>106496</u>	<u>PR168143</u>

 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation -3'Background 4k-8k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 --- zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 12

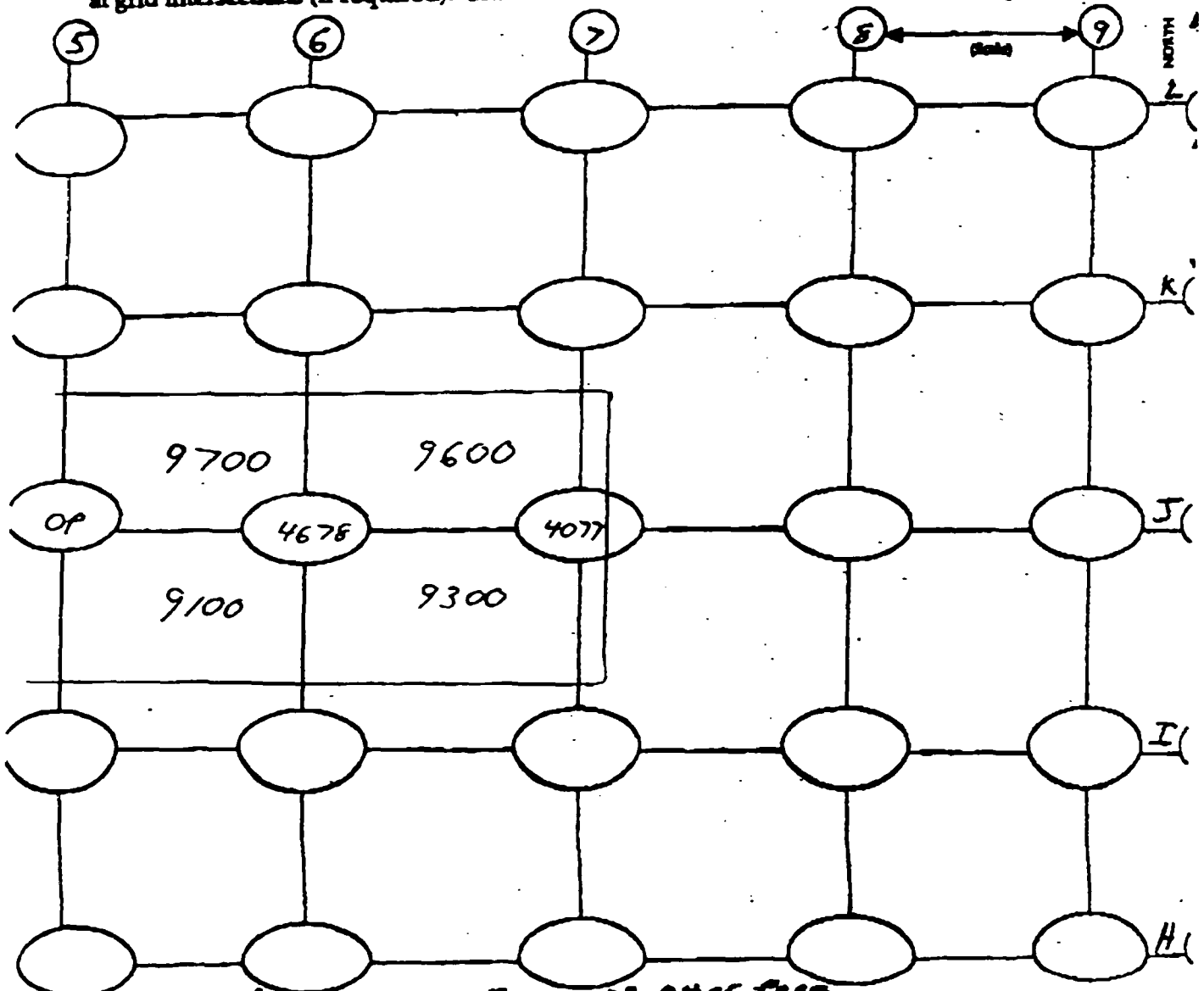
STS Consultants, Ltd.

Date 8/22/02Technician Glen HuberInst Model Ludlum 2221

meter #	Probe #
126496	PR165143

 Probe Type: 1'x1" NaI / 2'x2" NaI
 Shielded / Not Shielded
Lift Elevation -3'Background 4k-8k cpmAction Level 20650 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Poss
 ... boundary NE = Not excavated SL = Slope

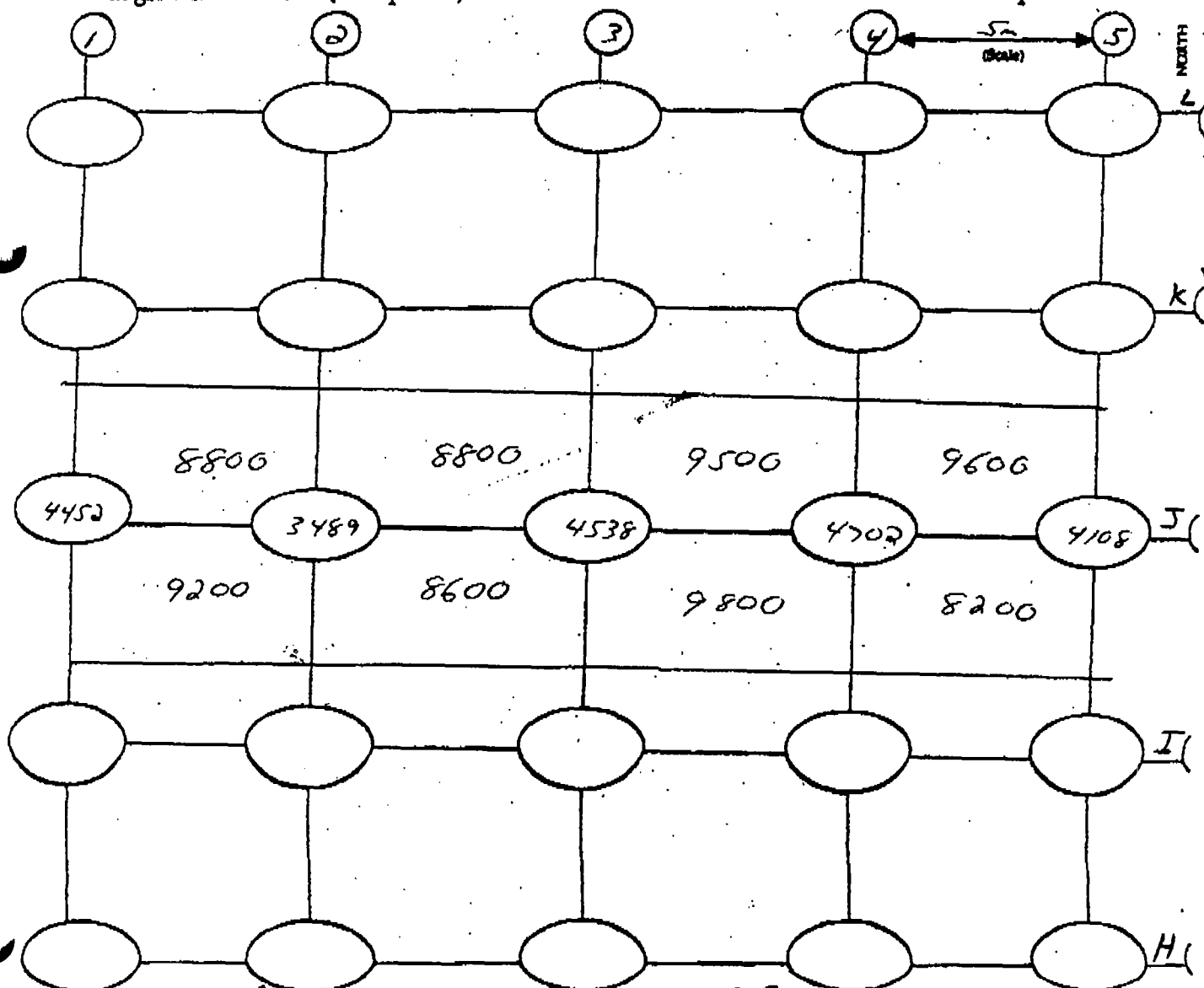


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 7 of 12Date 8/22/02Technician Glen HuberInst. Model Ludlum 2221meter # Probe B
Serial No. 126496 PR168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 4k-8k cpm Action Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OPZ OMER Page
 NE = Not excavated SL = Slope

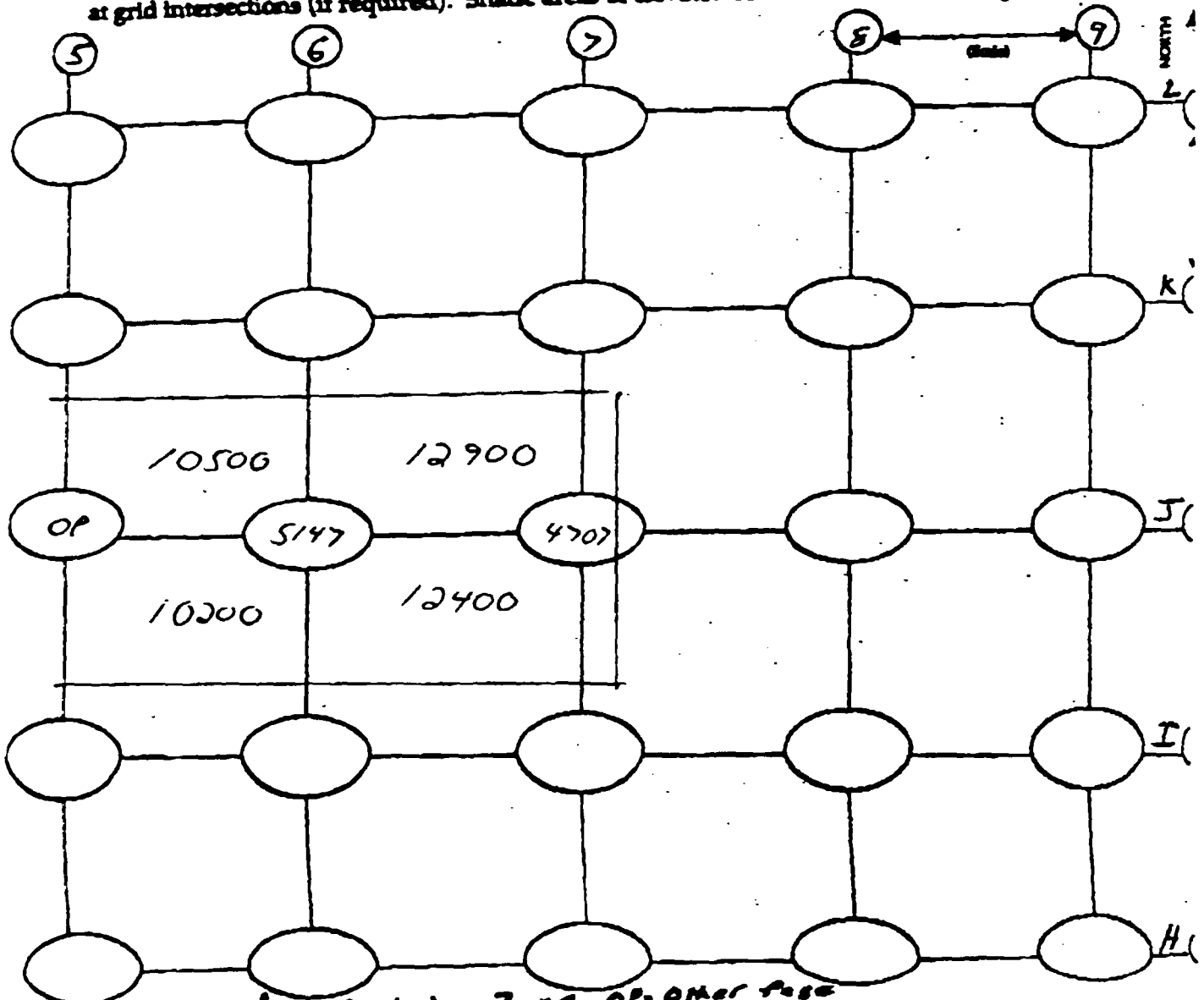


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 8 of 12Date 8/22/02Technician Glen HaberInst. Model Ludlum 2221Serial No. 126496 Probe # PR165143Probe Type 1"x1" NaI / 2"x2" NaI
Shielded Not ShieldedLift Elevation -4.5'Background 4K-8K cpm Action Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP & Omer Pass
boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 9 of 12

Date

8/22/02

Technician

Glen Huber

Inst. Model

Ludlum 2221

Serial No.

meter #
106496

Probe #

PR168143

Probe Type:

1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation

- 6'

Background

4-8k

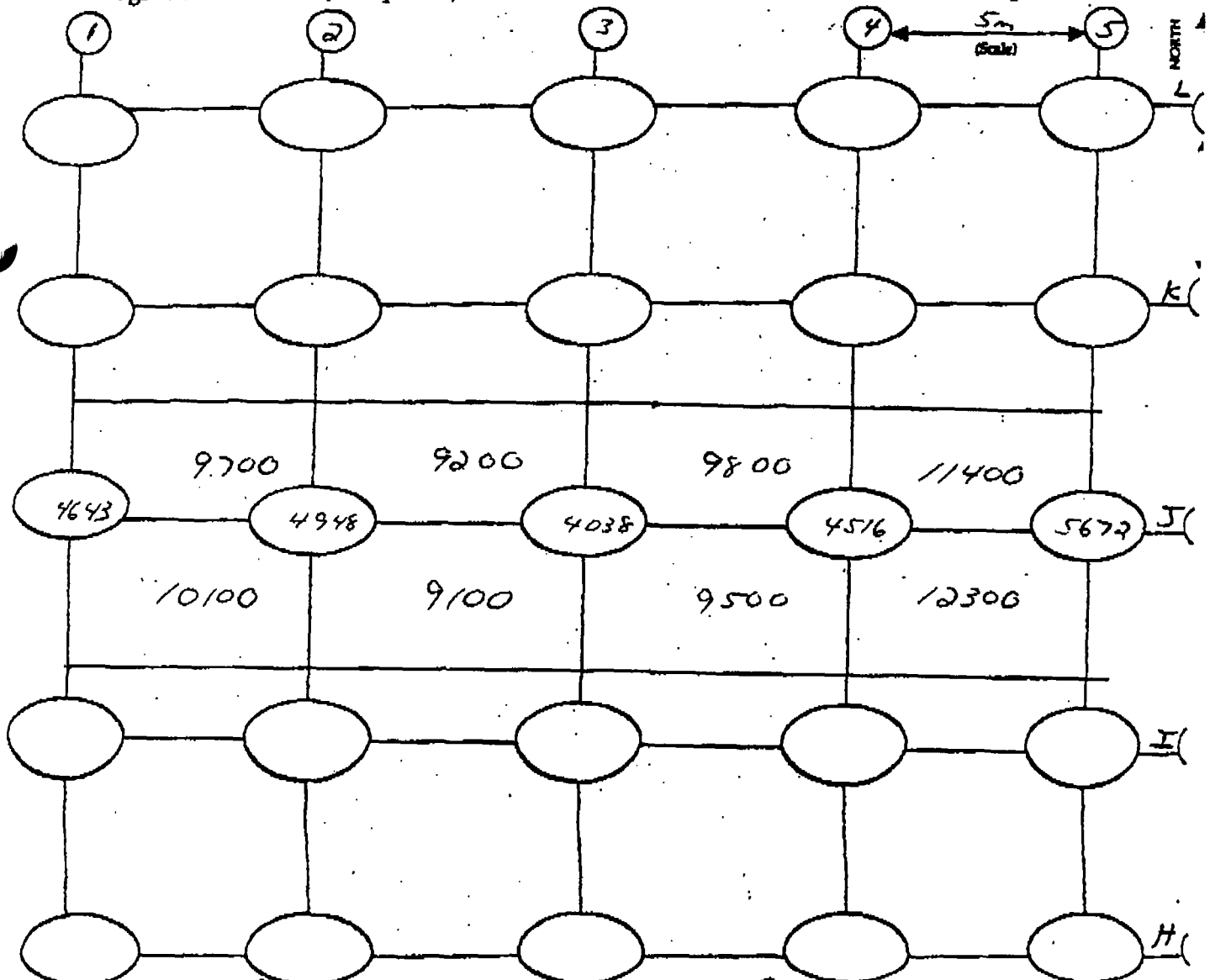
cpm

Action Level

20680

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
 NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 10 of 12

Date

8/22/02

Technician

Ken Huter

Inst Model

Ludlum 2221

Serial No.

meter #Probe #12496PR155143

Probe Type

1"x1" NaI / 2"x2" NaIShielded Not Shielded

Lift Elevation

-6'

Background

4K-8K

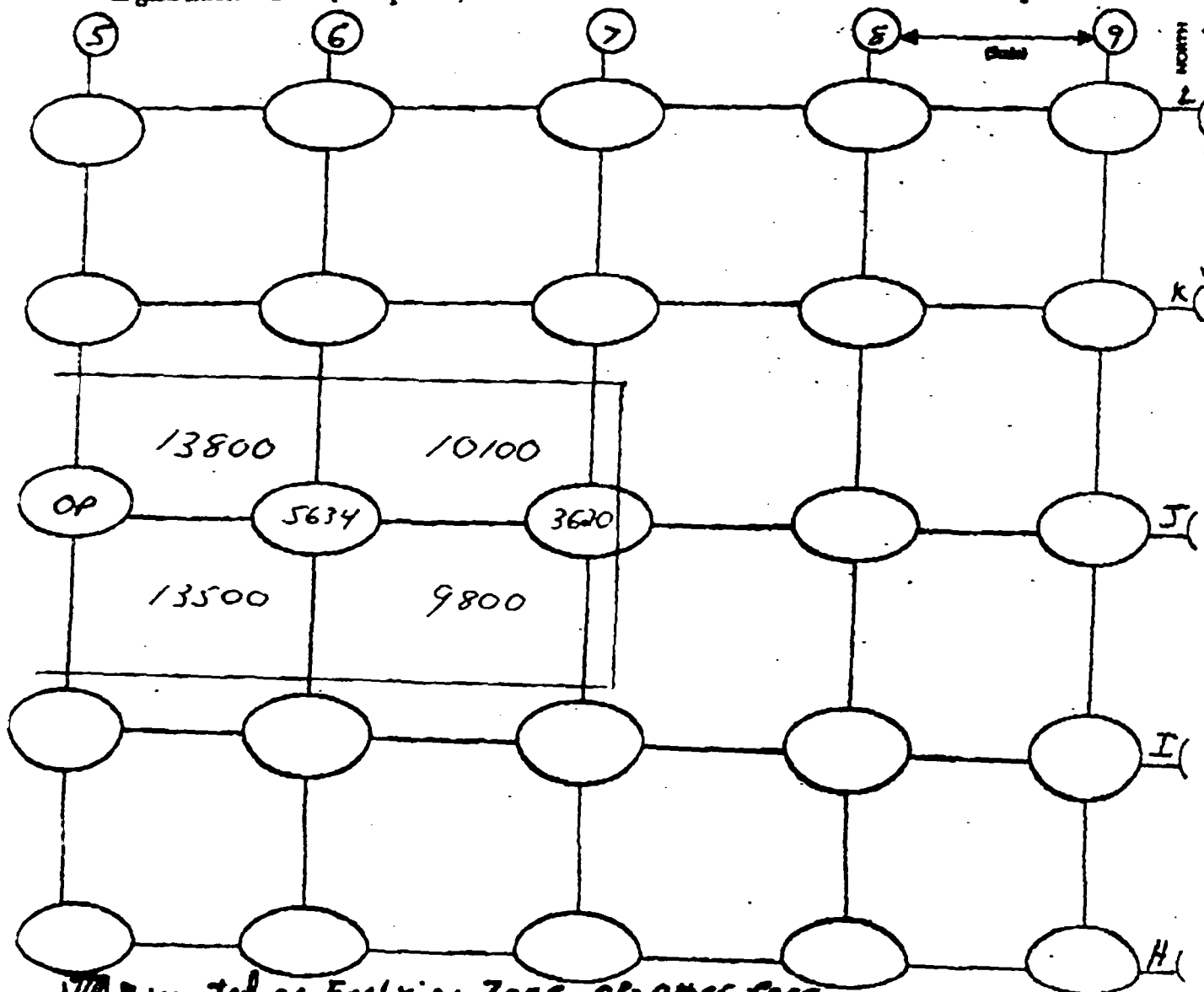
cpm

Action Level

20680

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP=Other Pass

☐ Exclusion zone boundary NE=Not excavated SL=Slope

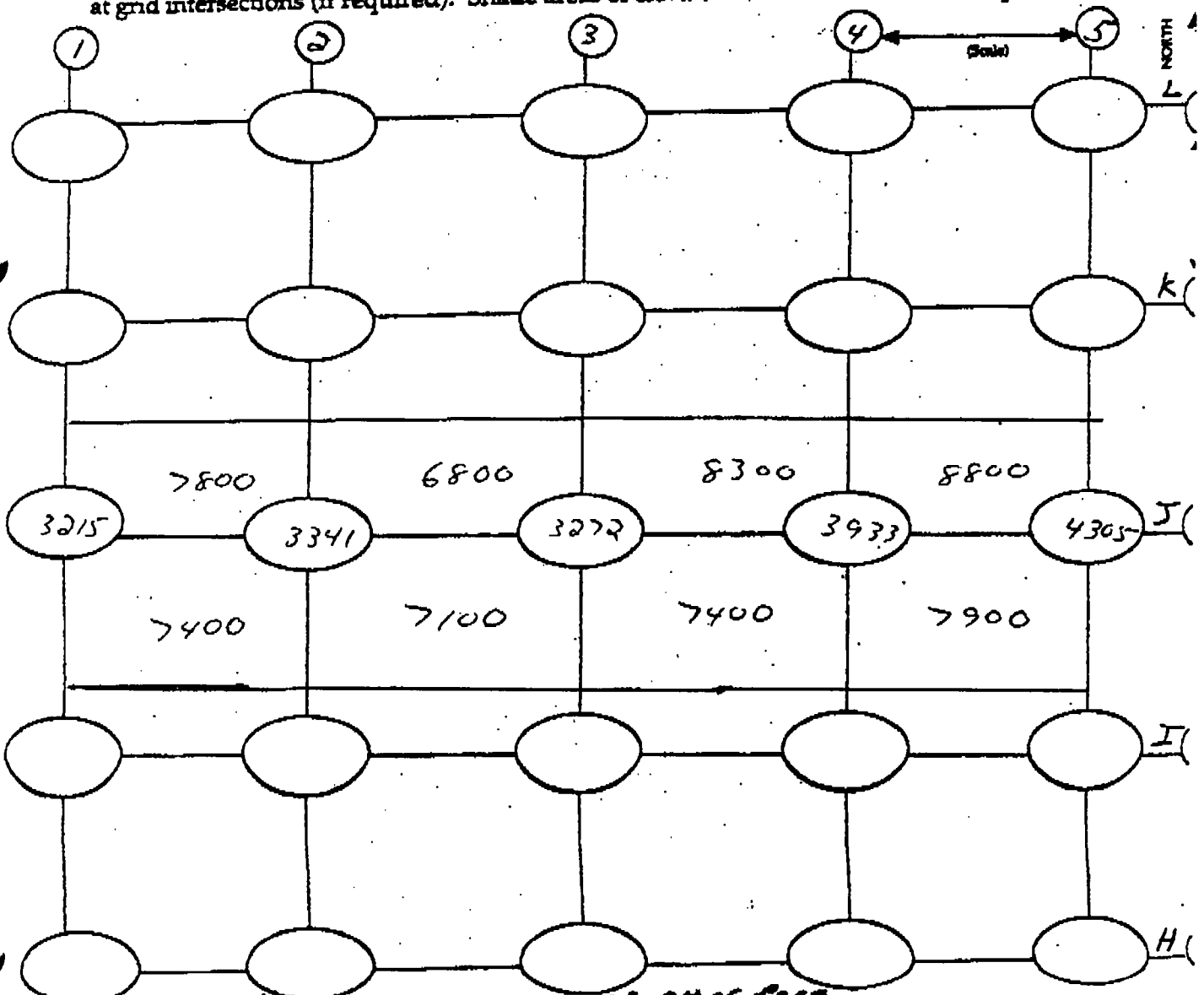


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 11 of 12Date 8/22/02Technician Glen HuberInst. Model Ludlum 2221meter # 126496 Probe # PR168143Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not ShieldedLift Elevation -7.5'Background 4k-8k cpm Action Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other P-ss
 P-ss - Exclusion zone boundary NE = Not excavated SL = Slope



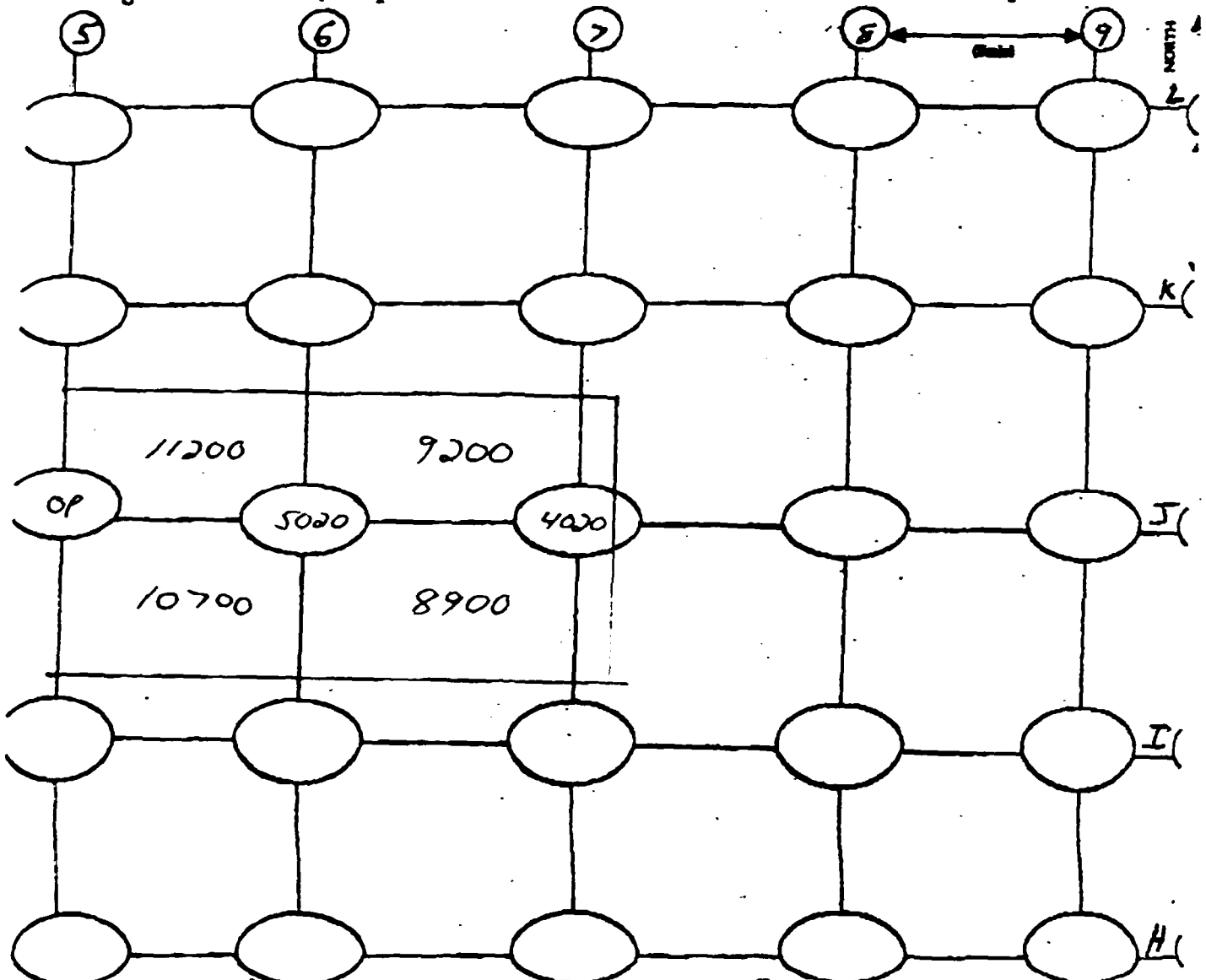
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 12 of 13

STS Consultants, Ltd.

Date 8/22/02Technician Glen HoberInst. Model Ludlum 2221meter # Probe #
Serial No. 126496 PR165143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded (Not Shielded)Lift Elevation -7.5'Background 4k-8k cpmAction Level 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Page
 NE = Not excavated SL = Slope



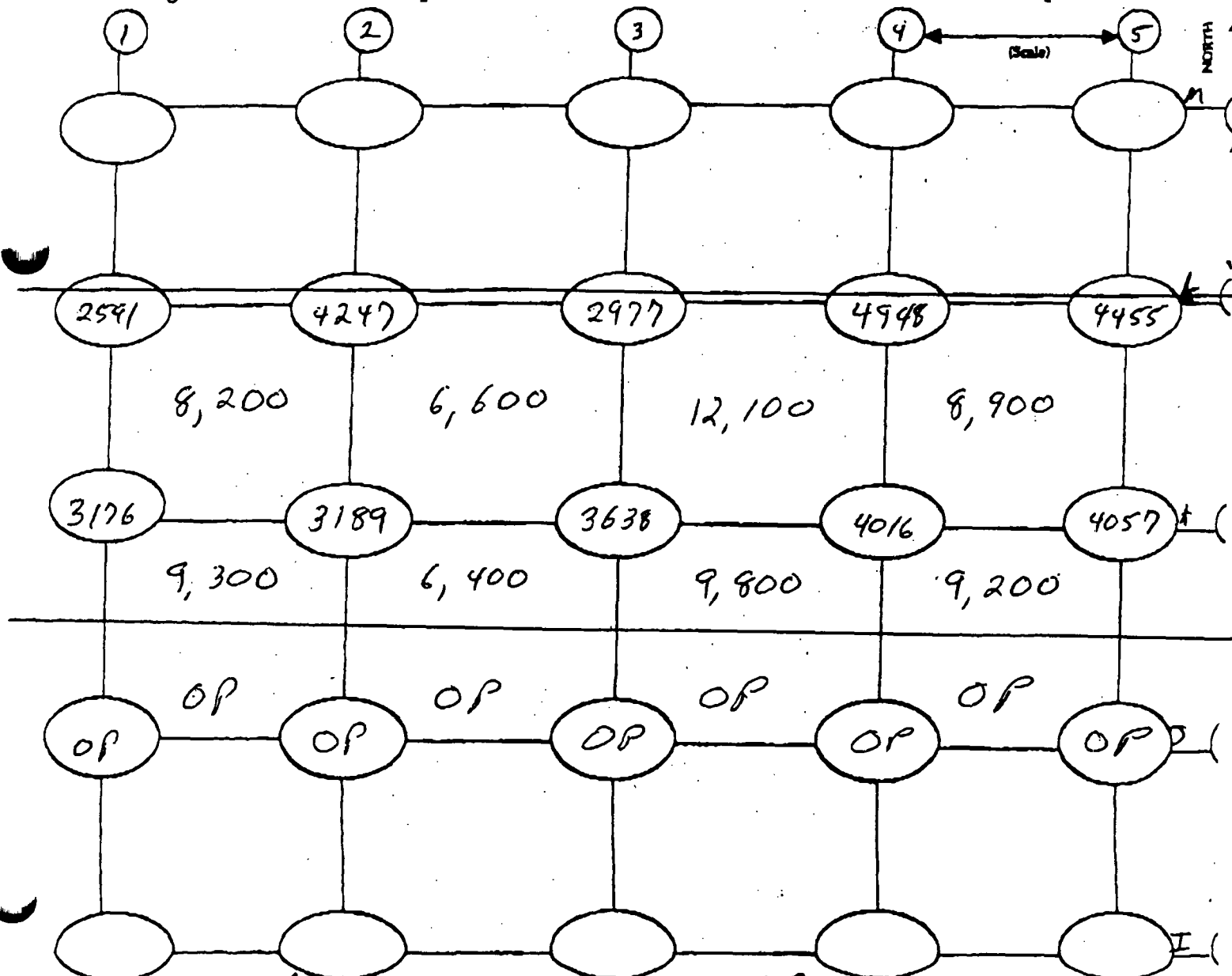
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 8-26-02 / 8-27-02 *Grids 1-4 done / Grid 4-5 done*Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded ☒ Not ShieldedLift Elevation SurfaceBackground 34-74 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
--- = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 6

STS Consultants, Ltd.

Date Grid 1-4 done / Grid 4-5 done
8-26-02 / 8-27-02

Technician L D Smith

meter # 126496 / Probe # 168143

Inst. Model Ludlum 2221

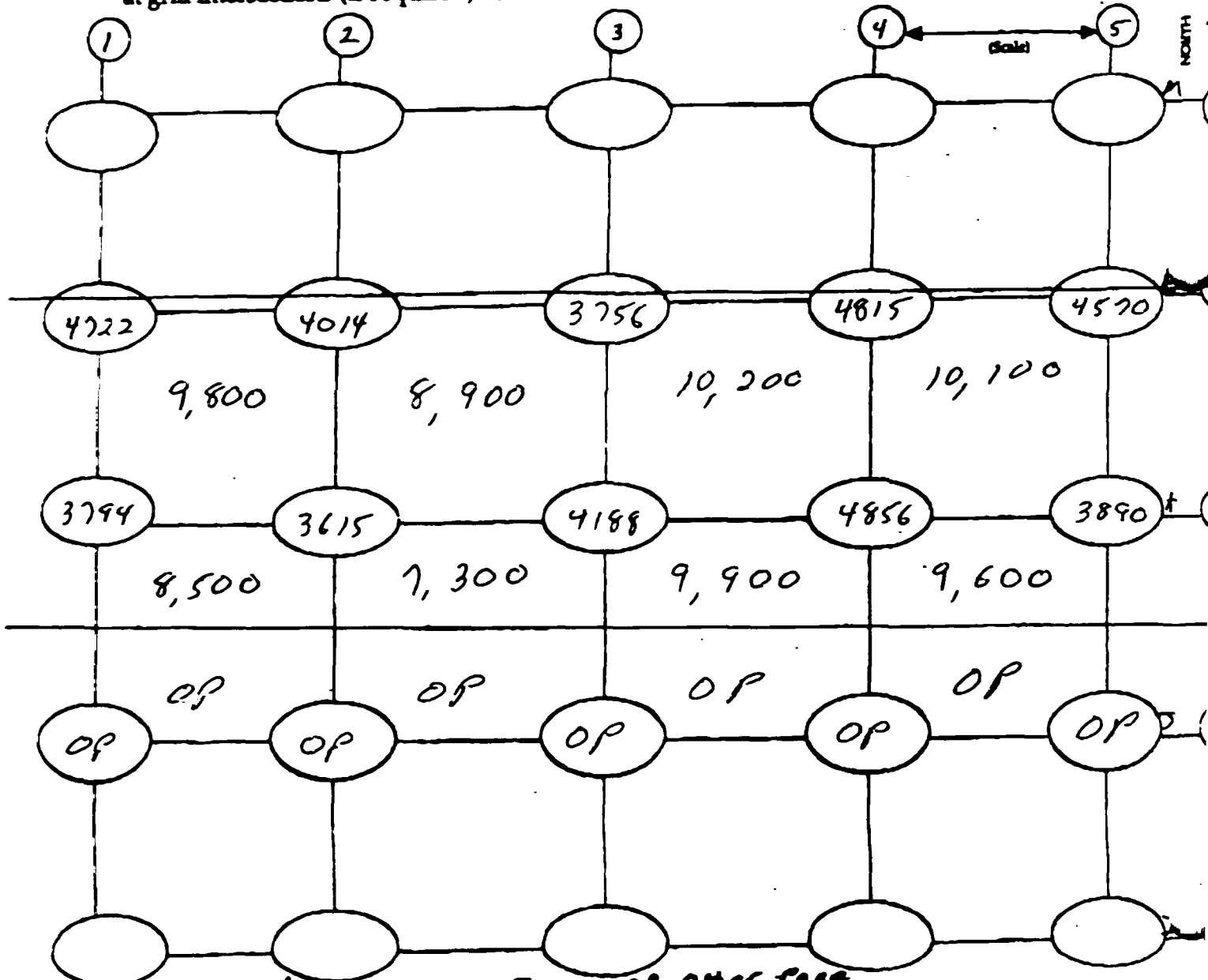
Lift Elevation -1.5'

Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded / Not Shielded

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Over Pass
NE: Not excavated SL: Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 4

STB Consultants, Ltd.

Date 8-26-02 / 8-27-02
Grids 1-4 done / Grid 4-5 done

Technician L D Smith

Inst. Model Ludlum 2221

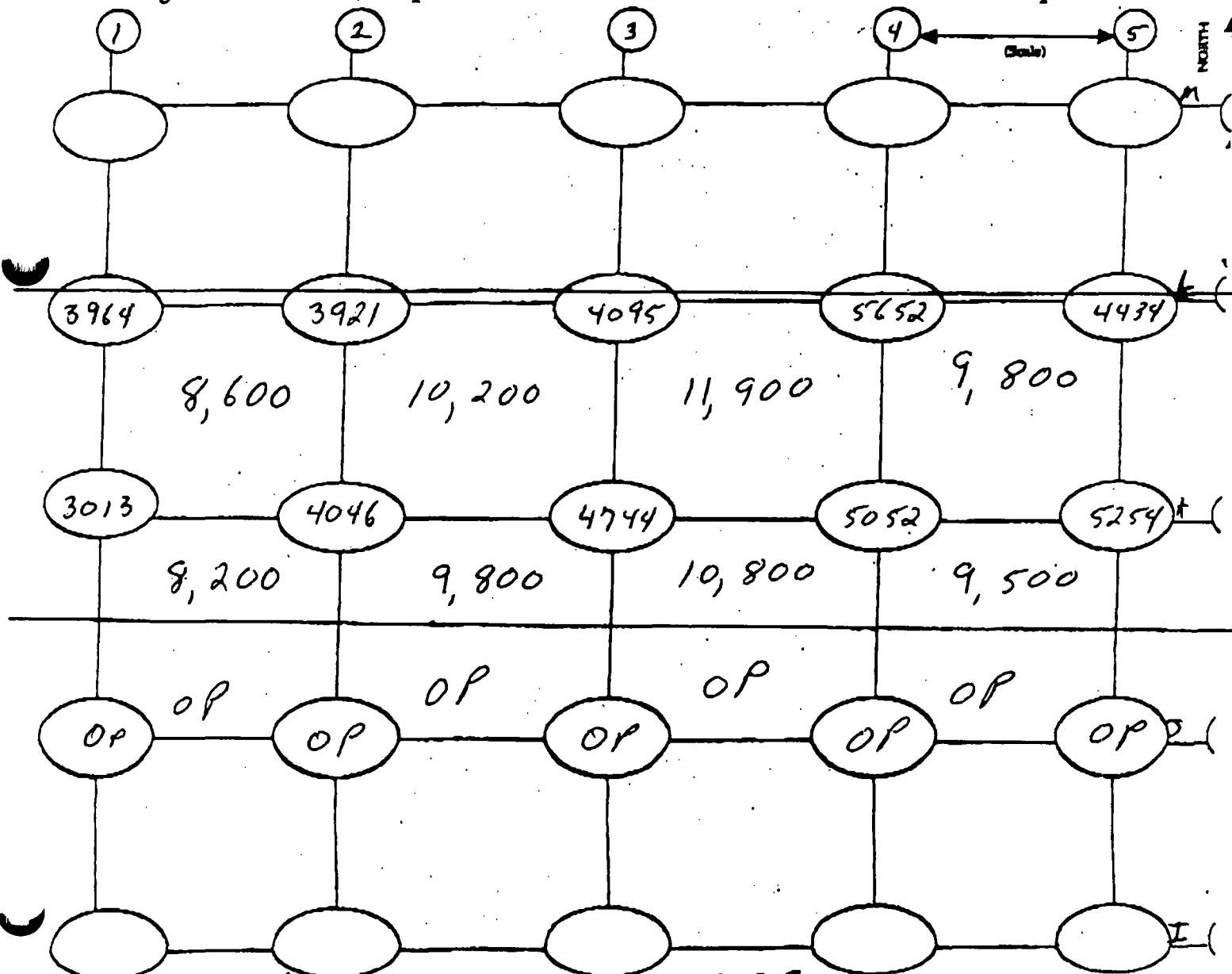
meter # 126496 / 168143
Probe #

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 3A-7A cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
- Exclusion zone boundary NE = Not excavated SL = Slope



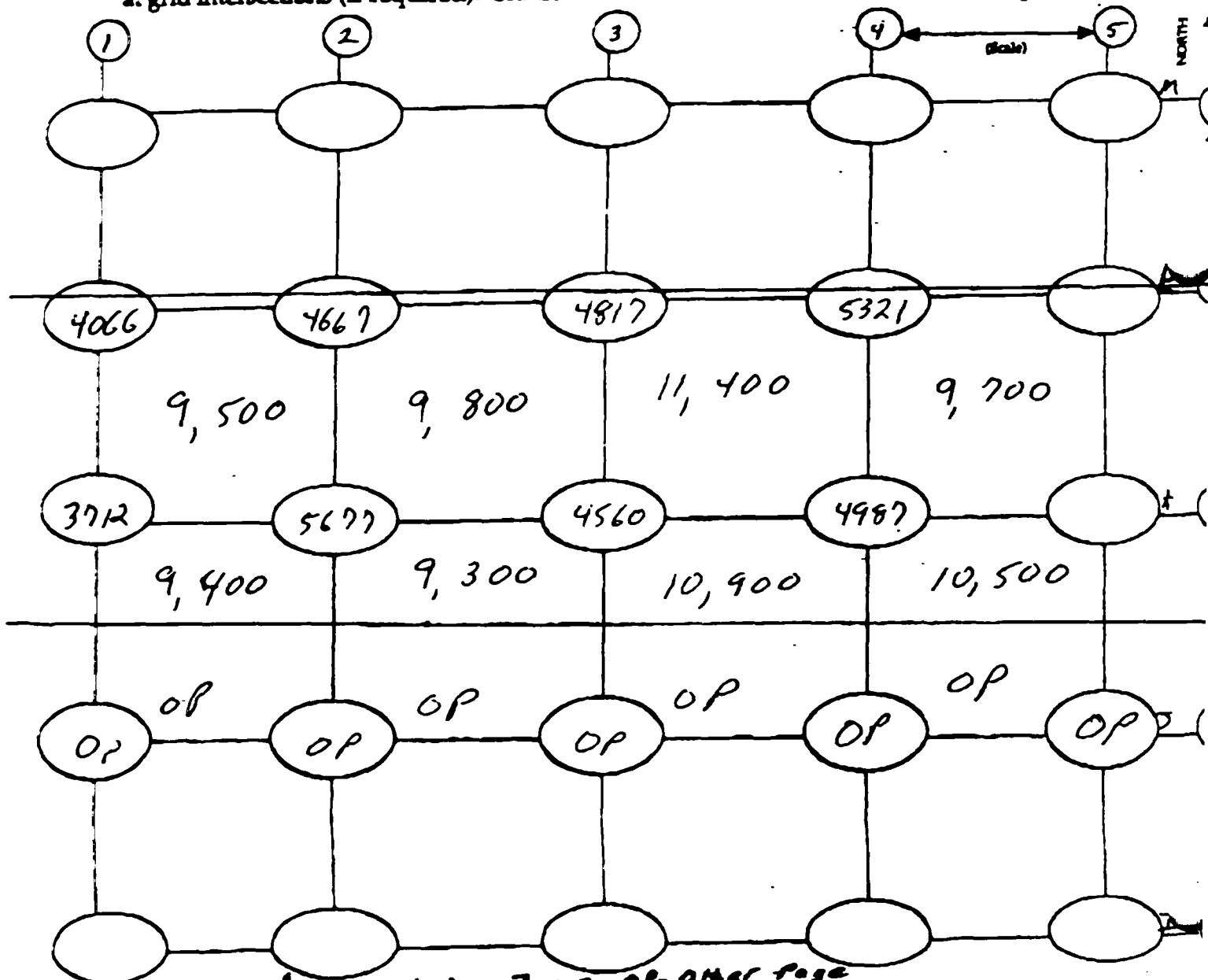
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 8-26-02 / Grid 1-4 done / Grid 4-5 done
8-27-02Technician L D Smith
meter # / Probe #Inst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 34-74 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Page
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 8-26-02 / 8-27-02
 Grids 1-4 done / Grid 4-5 done

Technician L.D. Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

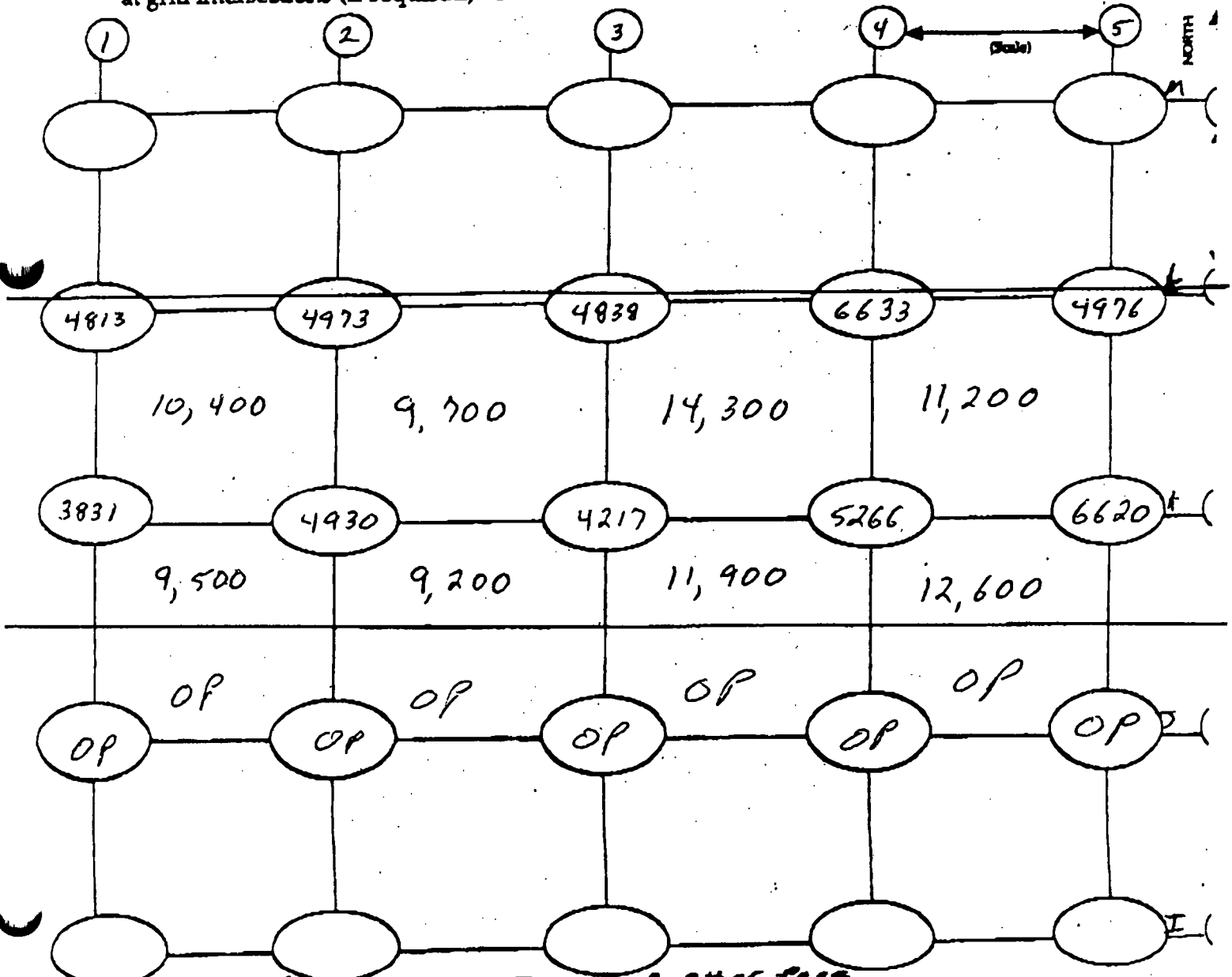
Probe Type: 1'x1' Nal / 2'x2' Nal
 Shielded / Not Shielded

Lift Elevation -6'

Background 3A-7A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other page
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 8-26-02 / 8-27-02 Grids 1-4 done / Grid 4-5 done

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

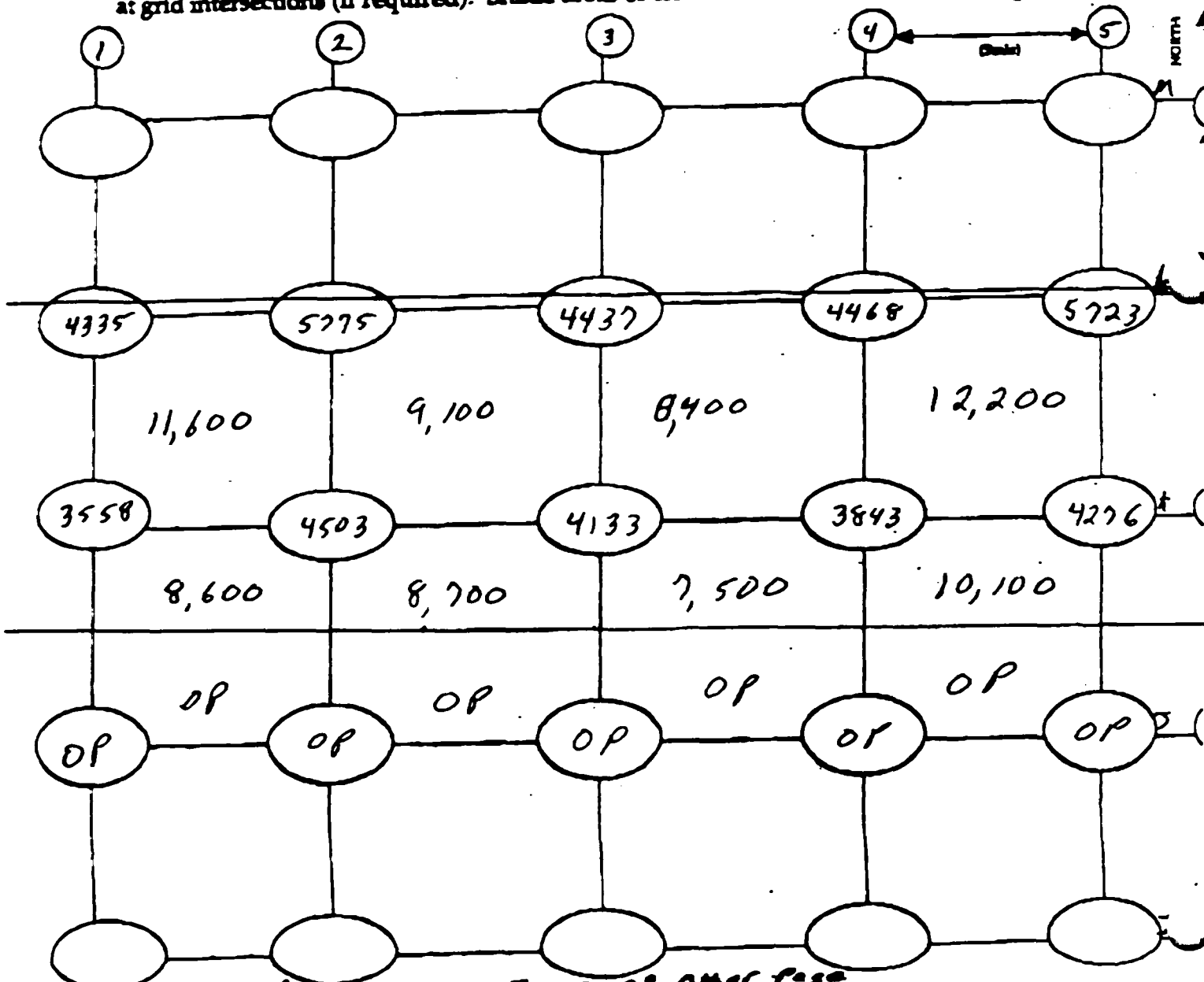
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 3A-7A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
SL = Exclusion Zone boundary NE = Not Excavated SL = Slope

V GAH



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 7

STS Consultants, Ltd.

Date 08/26

Technician Toby Shewan

Inst. Model Ludlum 2221

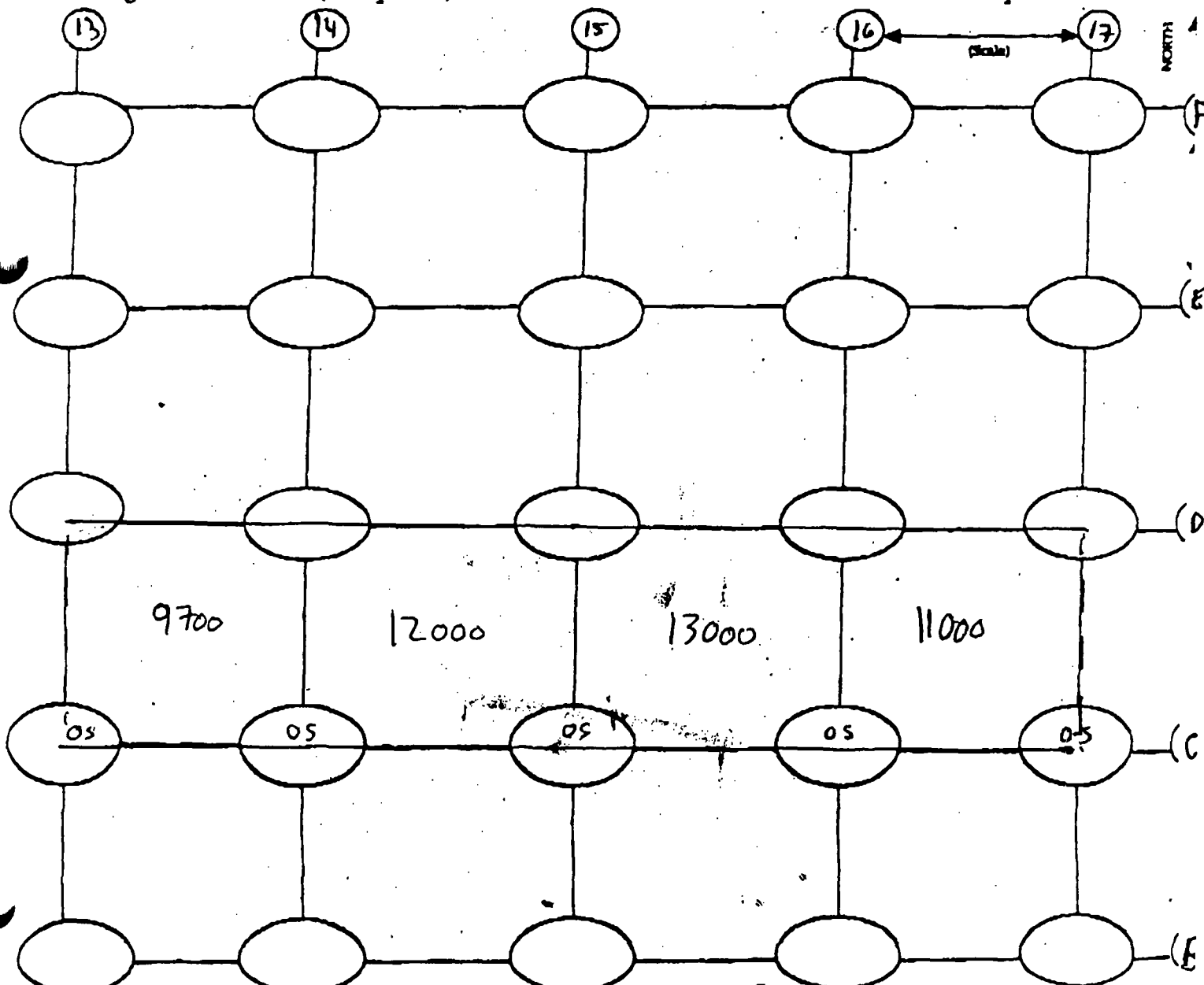
meter # 152944 Probe # PR 169/48

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 8k - 14k unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone DP2 OMER Pass
LAUNDRY NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 7

STS Consultants, Ltd.

Date 8/26

Technician Toby Shewan

Inst. Model Ludlum 2221

meter # Probo 28
Serial No. 132814 PR168146

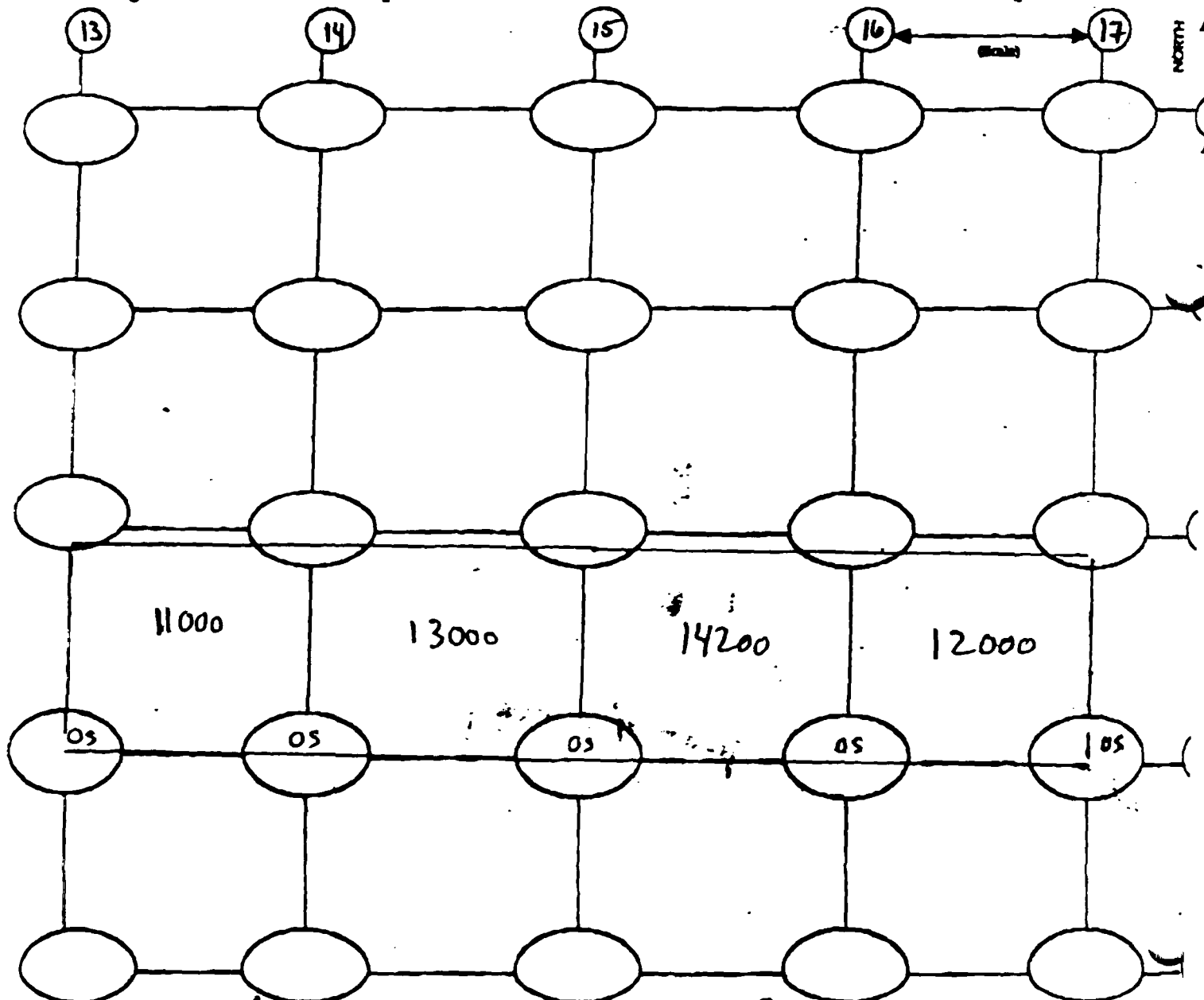
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background Sk-14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OPA OMER page
Laundry NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 7

STS Consultants, Ltd.

Date 08/26

Technician Toby Skewon

Inst. Model Ludlum 2221

Serial No. 132844 / PR168148

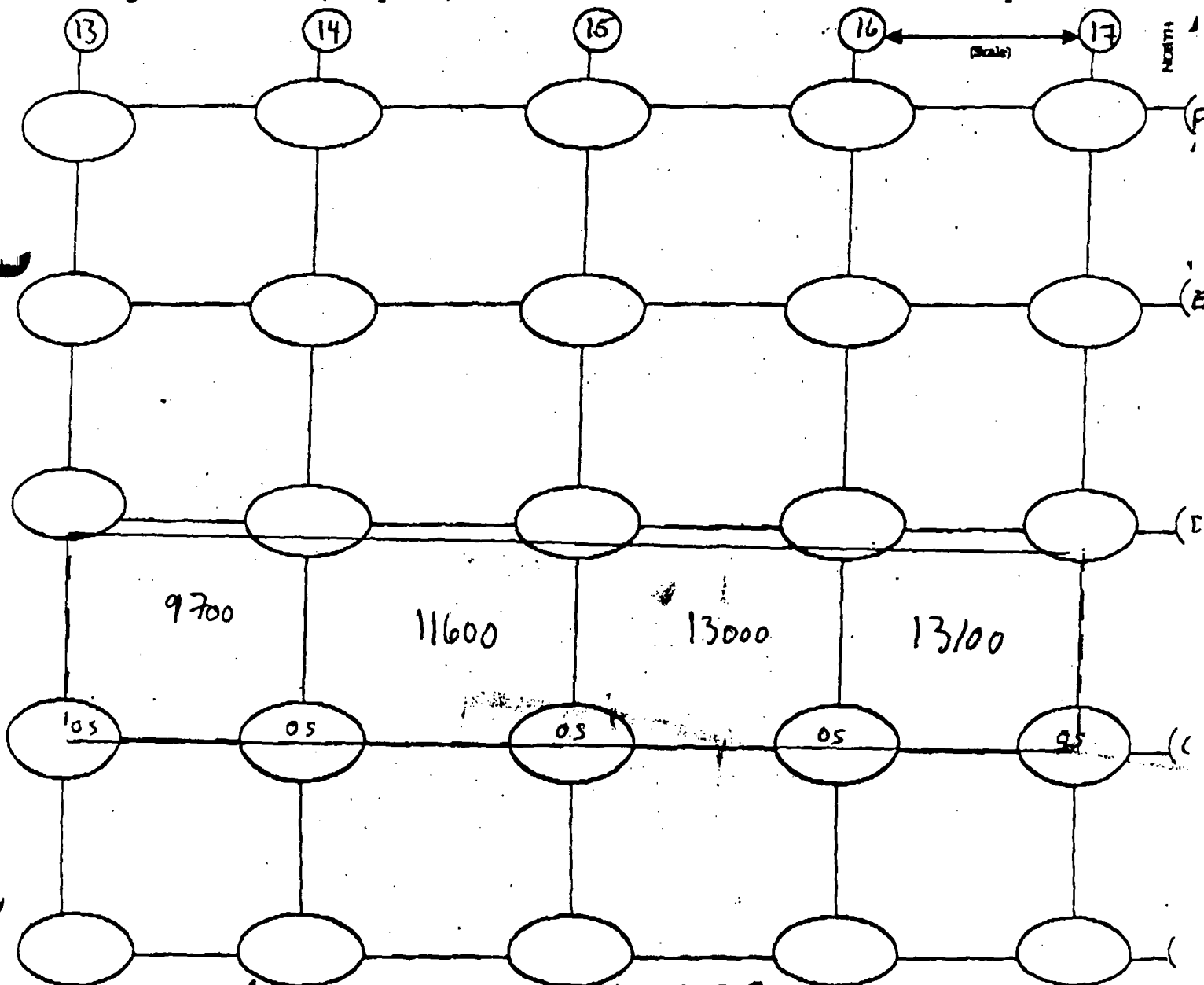
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3'

Background 8K - 14K unshielded cpm

Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Omer Page
- - - - - Boundary NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 4 of 7

STS Consultants Ltd.

Date 8/26

Technician Toby Shewan

Inst. Model Ludlum 2221

Serial No. 132844 / PR168148

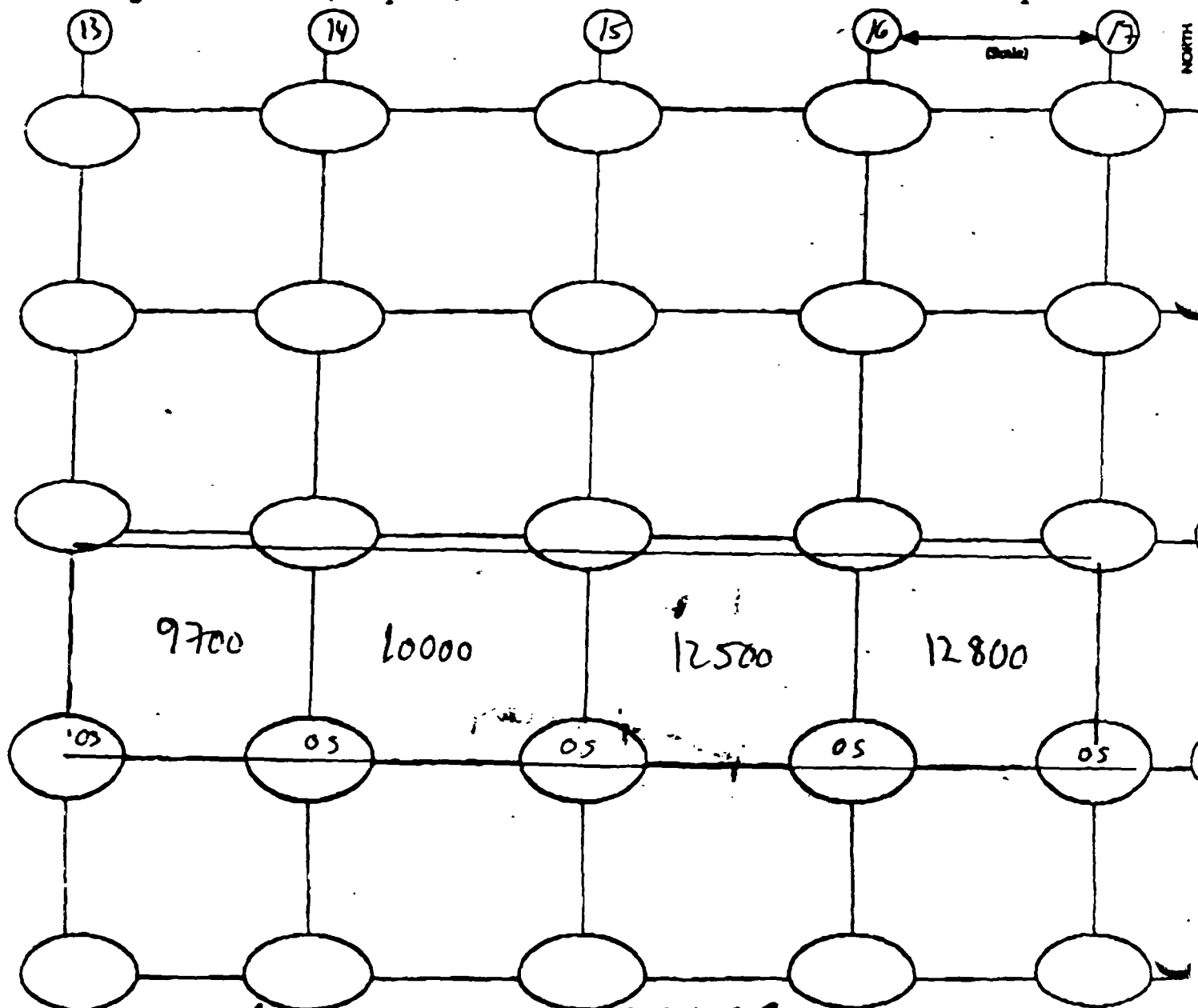
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 9K - 14 K unshielded cpm

Action Level 20707 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of 20m or more
Laundry NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 5 of 7

STS Consultants, Ltd.

Date 8/26

Technician Toby Shewan

Inst. Model Ludlum 2221

meter # Probe 8
Serial No. 132844 1K169148

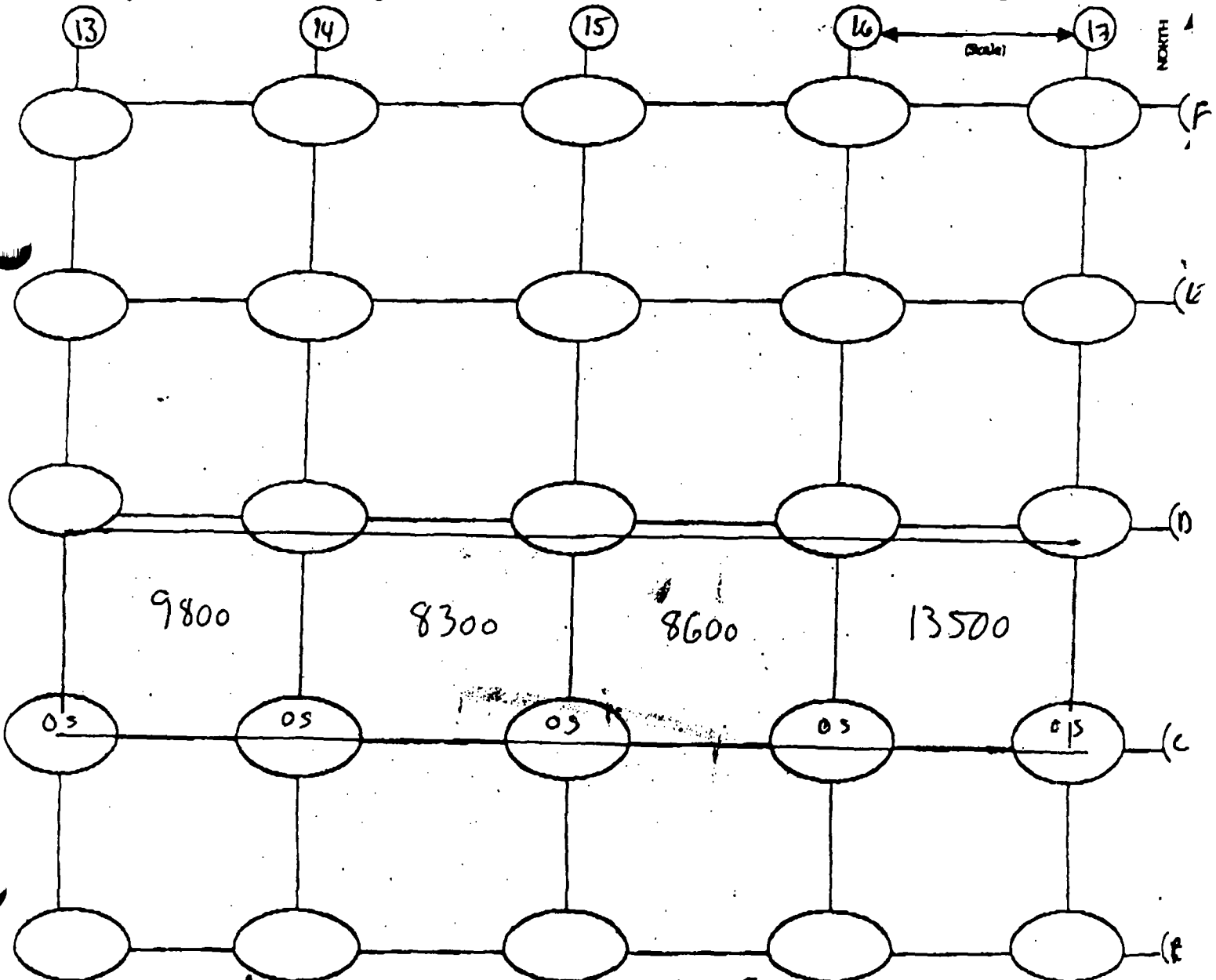
Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation -6'

Background 8K - 14K cpm

Action Level 20709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone per other page
- Laundry NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 7

STS Consultants, Ltd.

Date 8/26

Technician Toby Shayan

Inst. Model Ludlum 2221

Serial No. 132884 PR167148

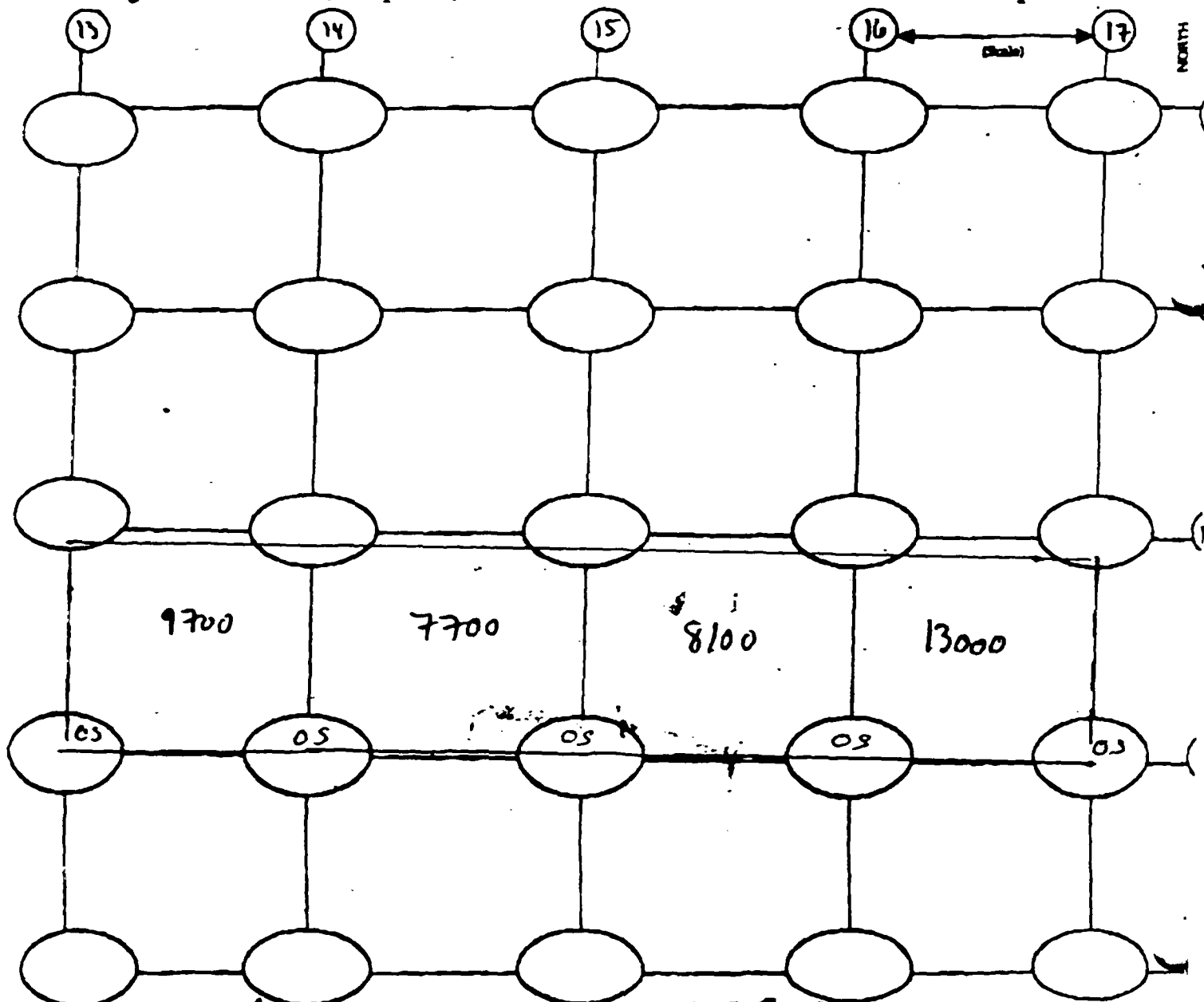
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 2.2 - 14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP20mer phase
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 7 of 7

STB Consultants, Ltd.

Date 8/16

Technician Toby Shawan

Inst. Model Ludlum 2221

Serial No. 132844 / PR168148

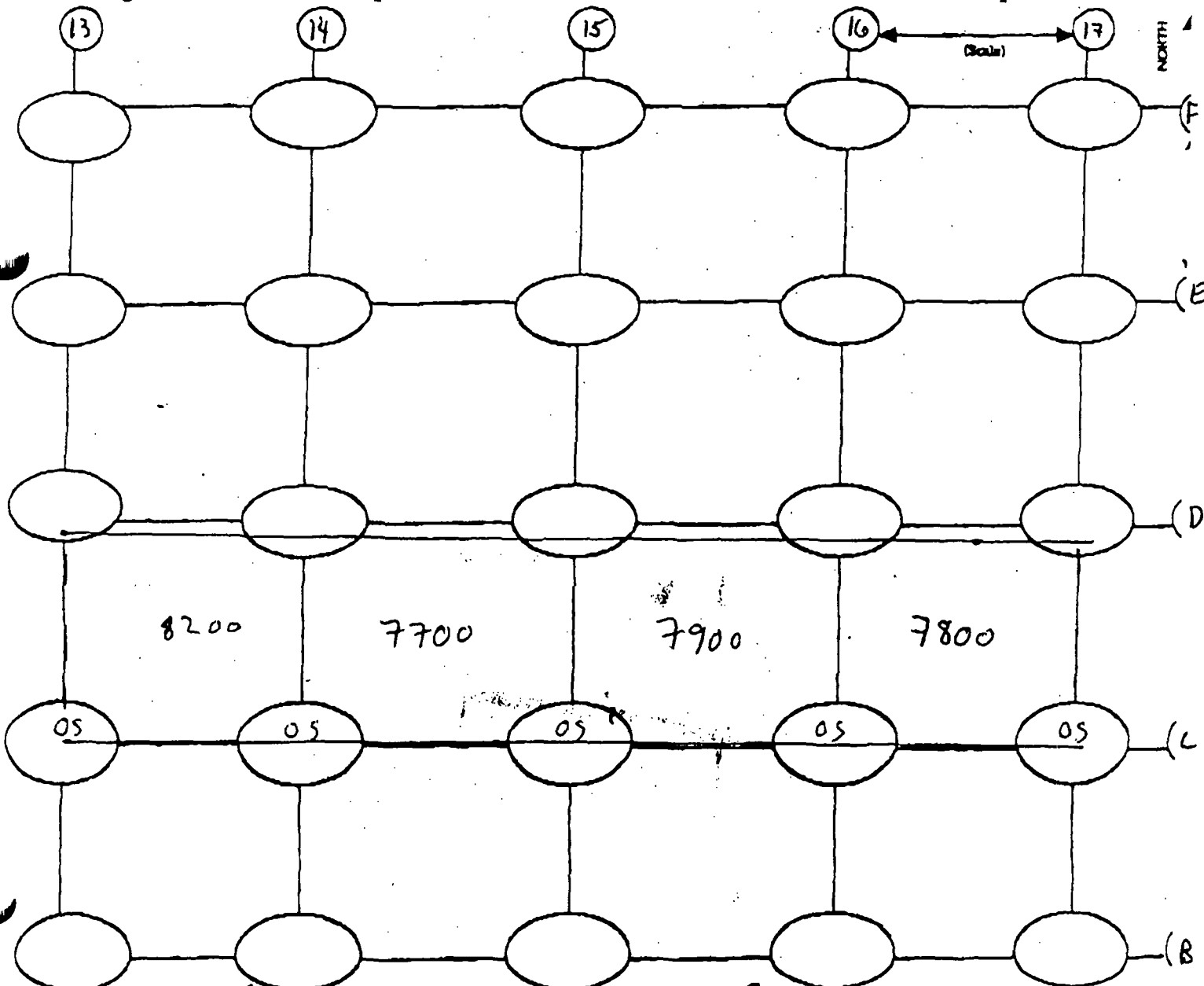
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -9'

Background 6K - 14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OPERATOR PAGE
LAUNDRY NE = NOT excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 7

STS Consultants, Ltd.

Date 8-27-02 / 8-28-02 *Grids 5-9 done / Grids 7-9 done*

Technician L D Smith

Inst. Model Ludlum 2221

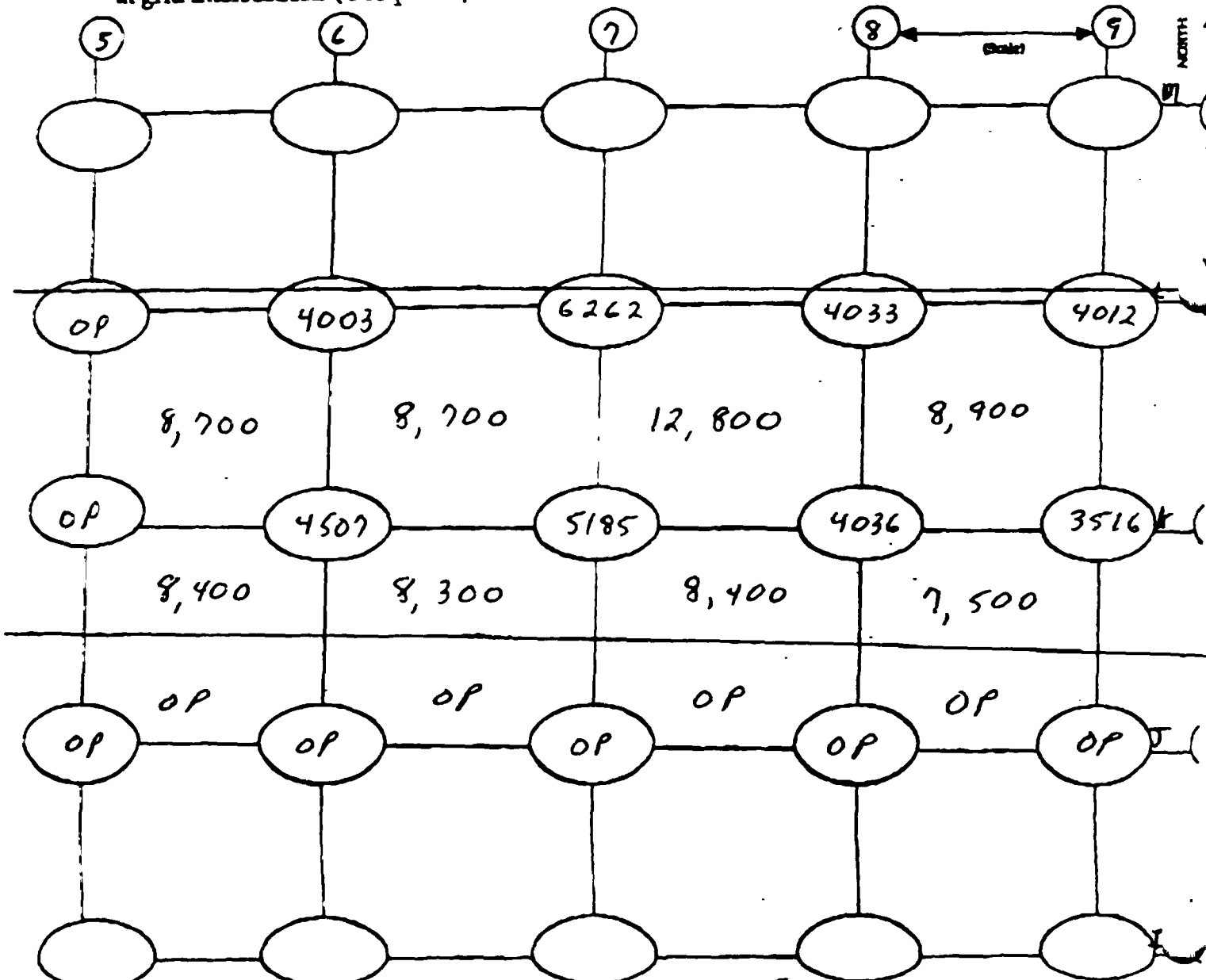
meter # 126496 Probe # 168143

Probe Type: 1"x1" Nal 2"x2" Nal
Shielded Not Shielded

Lift Elevation Surface

Background 3k-8k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Omer Pass
Exclusion zone boundary NE = Not excavated SL = Slope



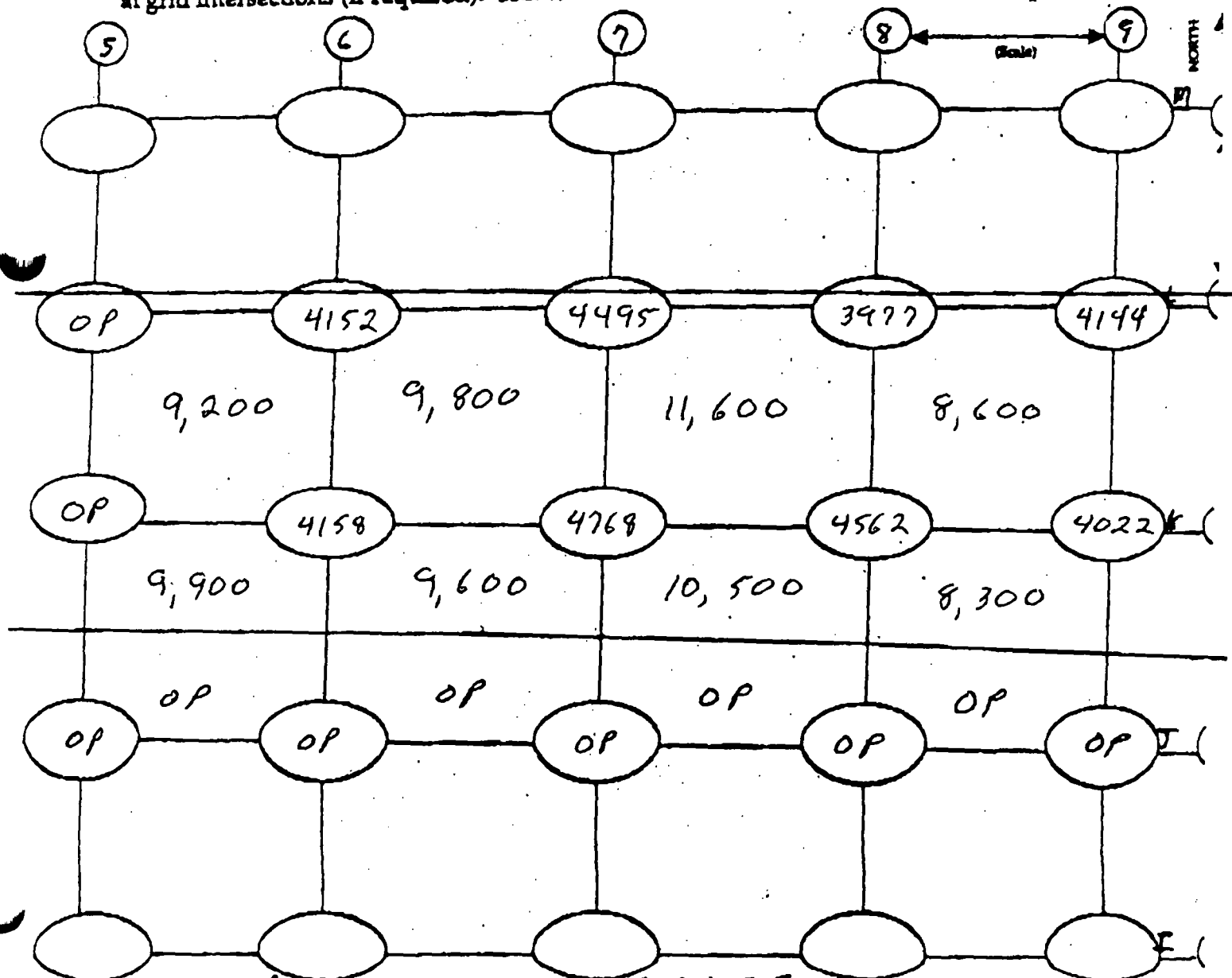
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 2

STS Consultants, Ltd.

Date 8-27-02 / 8-28-02
Grids 5-9 done / Grids 7-9 doneTechnician L D SmithInst. Model Ludlum 2221Serial No. 126496 / 168143
meter # / Probe #Probe Type: 1'x1' NaI 2'x2' NaI
Shielded ☒ Not Shielded ☒Lift Elevation -1.5'Background 3k-8k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Over Pass
SL: Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 7

STS Corporation, Ltd.

Date 8-27-02 / 8-28-02
 Grids 8-9 done / Grids 7-9 done

Technician L D Smith

Inst. Model Ludlum 2221

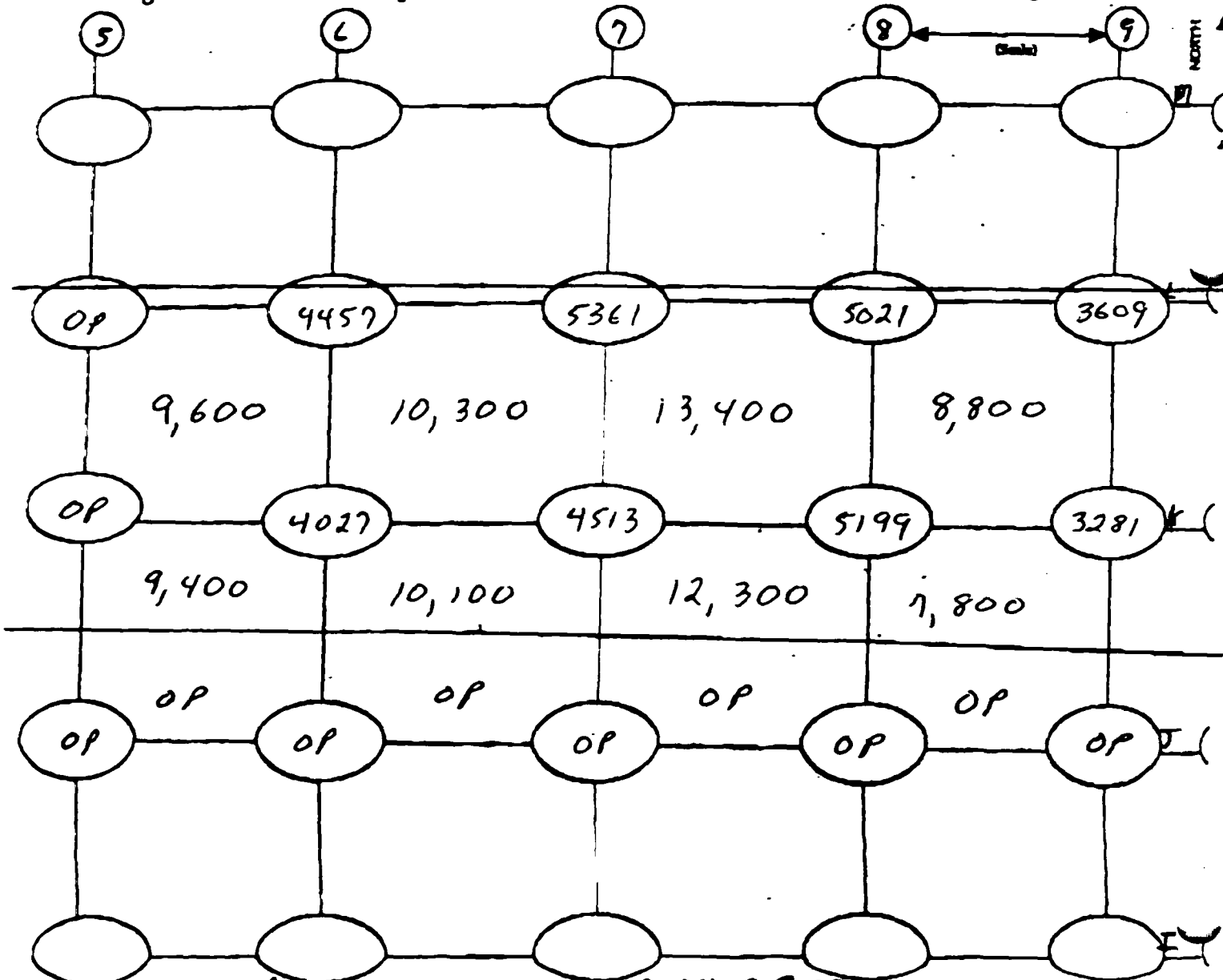
Serial No. 126496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded

Lift Elevation - 3'

Background 34-84 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 7

STS Consultants, Ltd.

Date 8-27-02 / 8-28-02 *Grids 5-7 done / Grids 7-9 done*

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143 *meter # / Probe #*

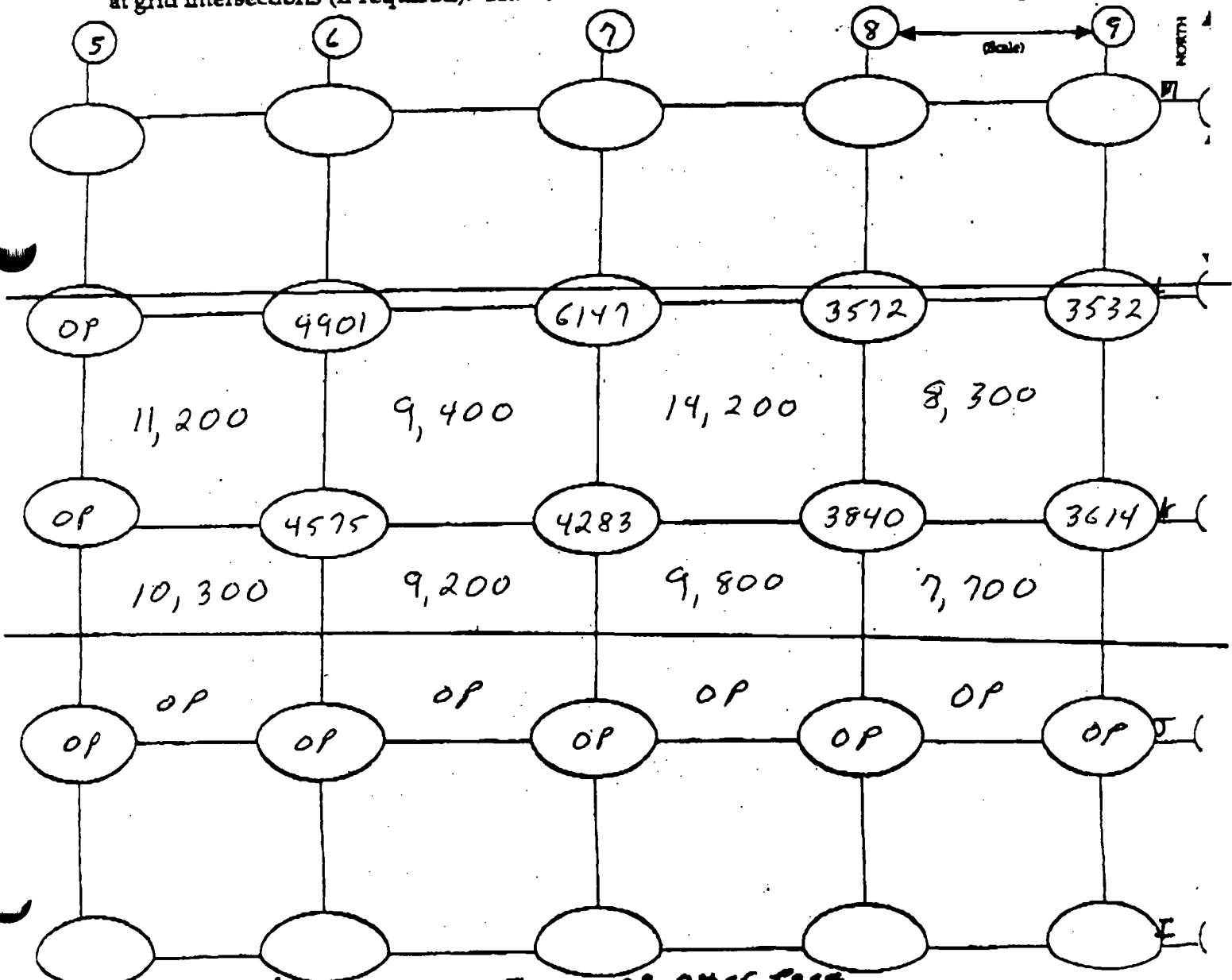
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 3k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Page
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 7

STS Consultants, Ltd

Grids 5-7 done / Grids 7-9 done
Date 8-27-02 / 8-28-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

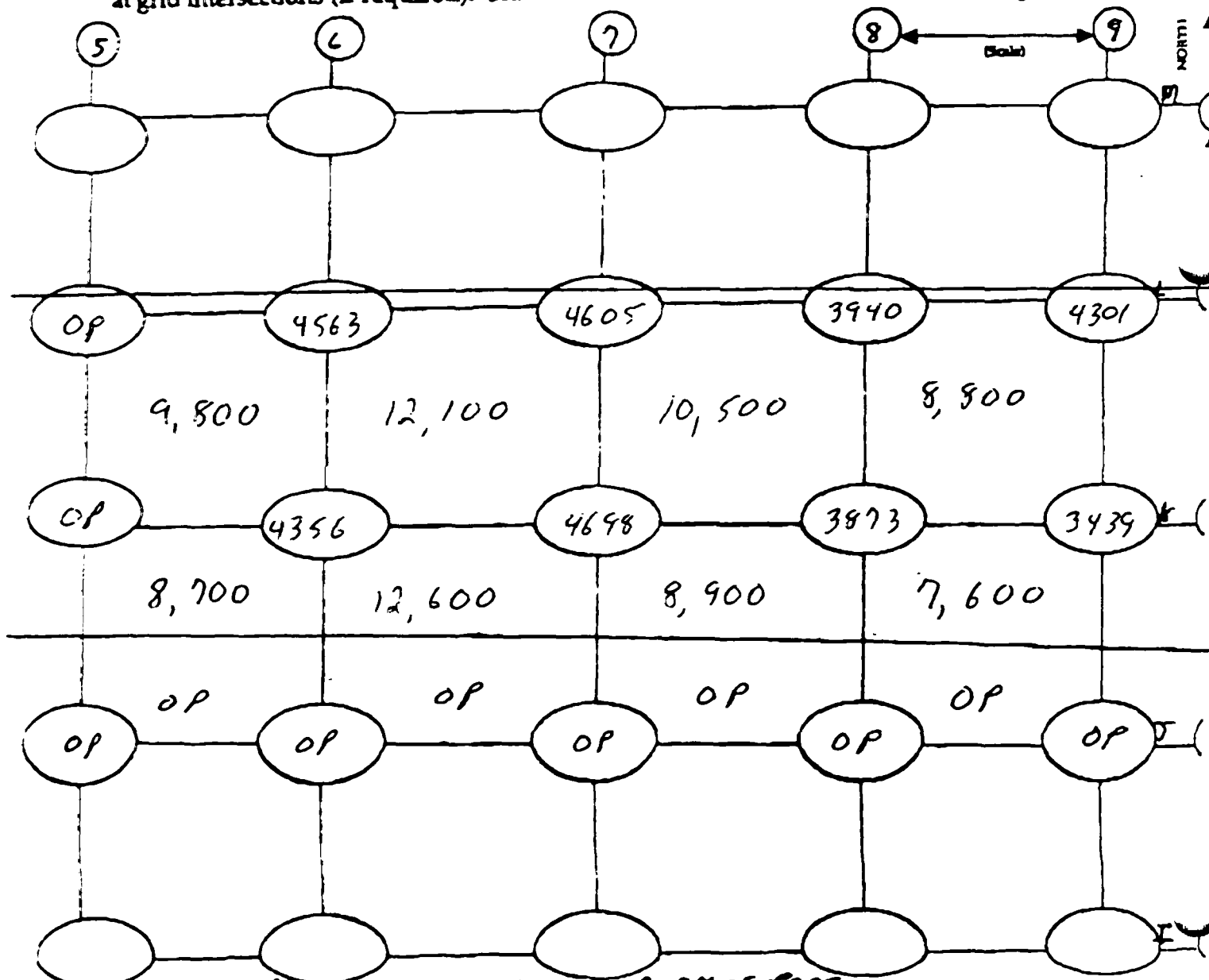
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation -6'

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
SL = Slope
NE = Not excavated



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 7

STS Consultants, Ltd.

Date 8-17-02 / 8-28-02
 Grids 5-7 done / Grids 7-9 done

Technician L D Smith

Inst. Model Ludlum 2221

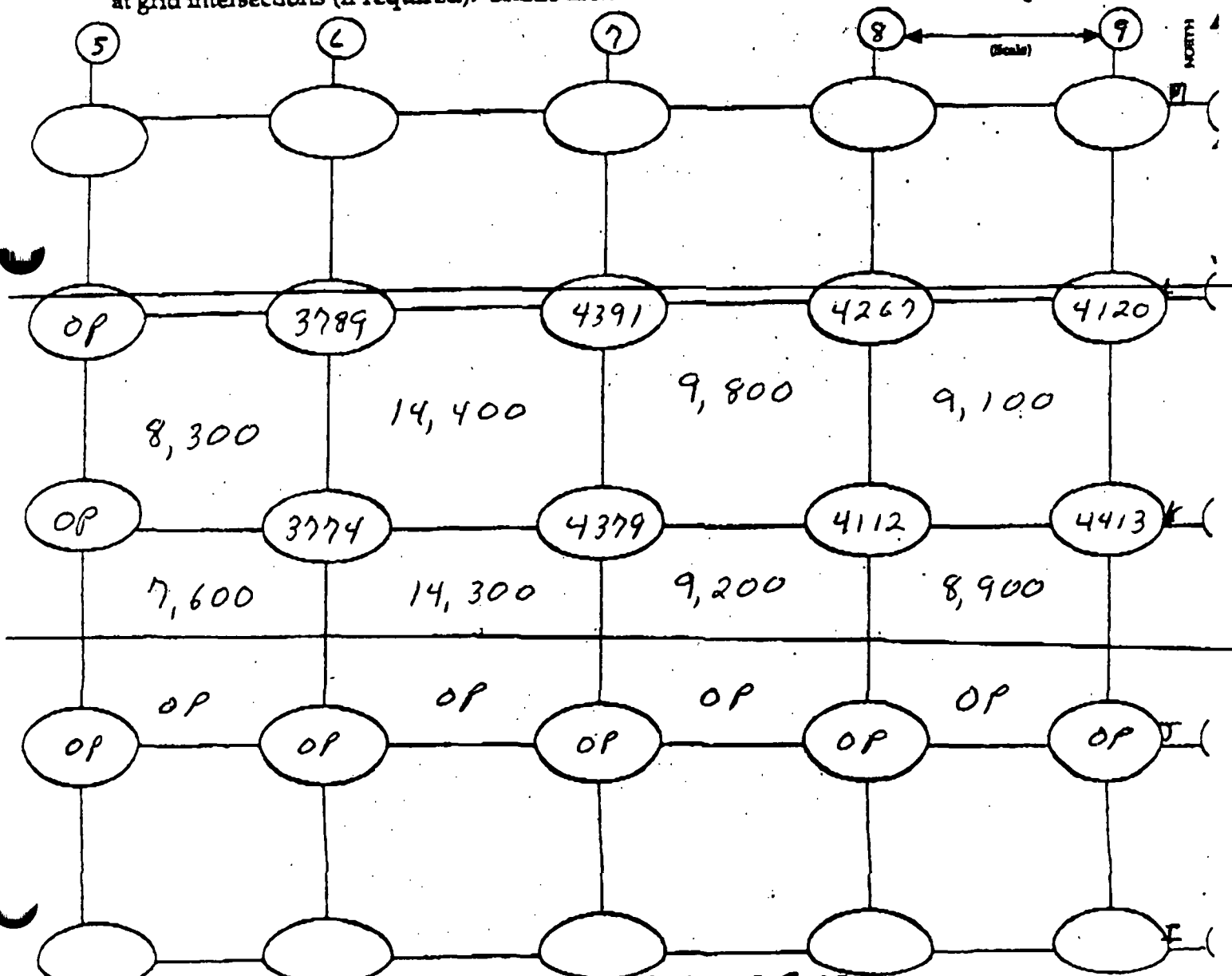
Serial No. 126496 / 168143
 Meter # Probe #

Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded

Lift Elevation -7.5'

Background 34-84 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP=Over range
 --- Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 2

STS Consultants Ltd.

Date 8-27-02 / 8-28-02 *Grids 5-7 done / Grids 7-9 done*

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

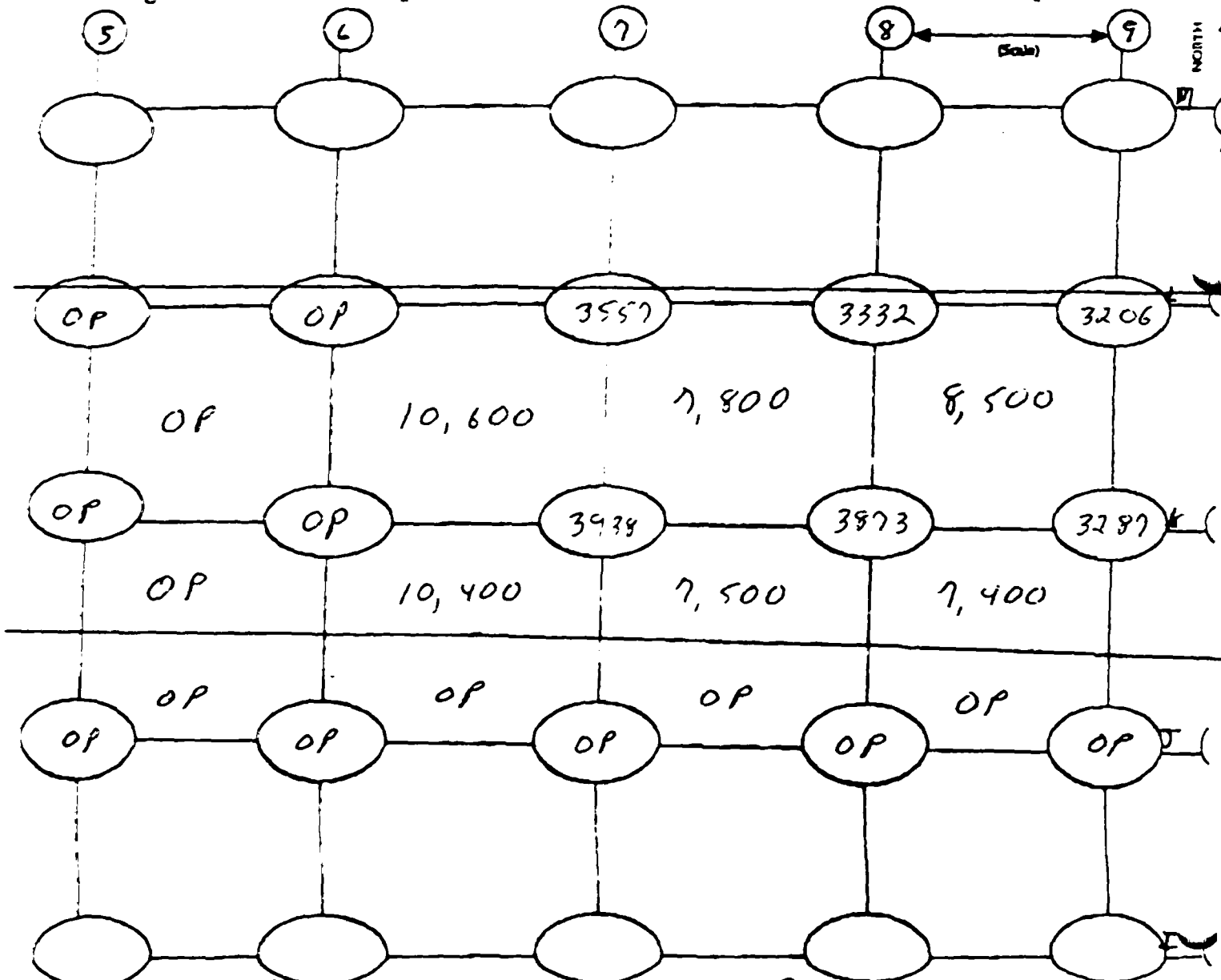
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -9'

Background 3k-8k cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 1 of 2

Date 8-28-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496

Probe # 168143

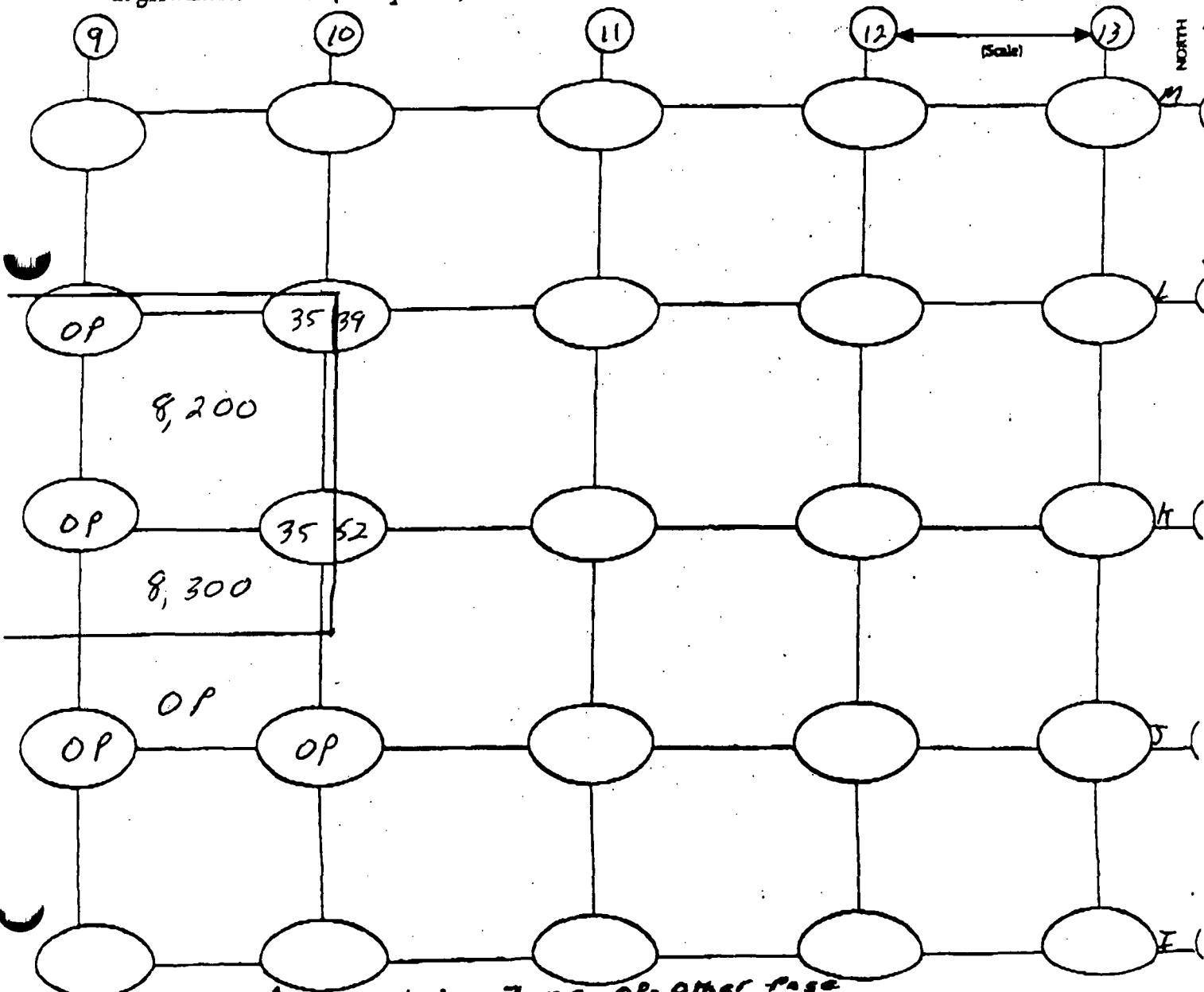
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 3K-8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP = Other use
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants Ltd.

Project # 25585-XI Project Name GMO Page 2 of 2

Date 8-29-02

Technician L D Smith
meter # Probe B

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

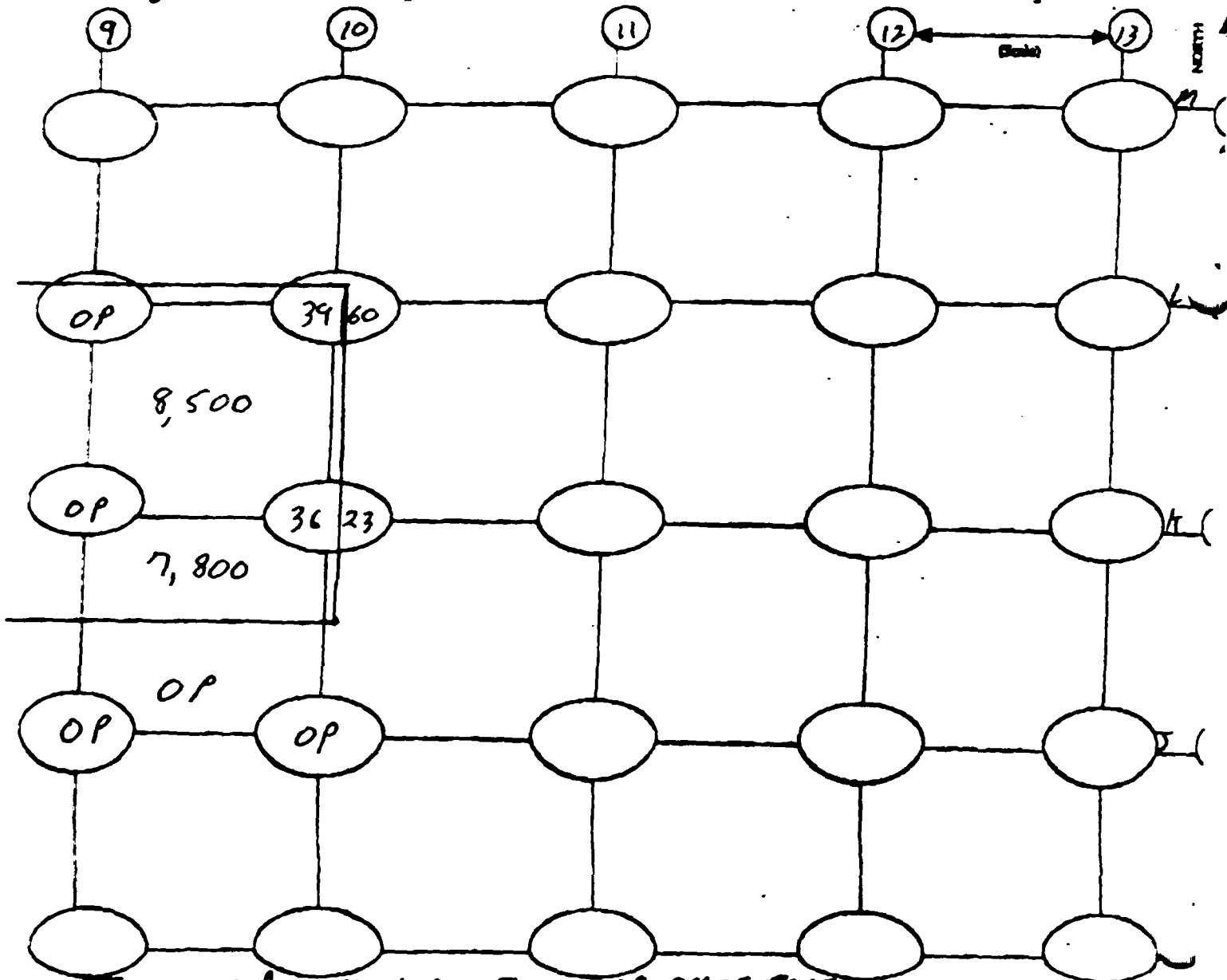
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
SL = Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 7

Date 8-28-02

Technician L D Smith
meter # Probe B

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

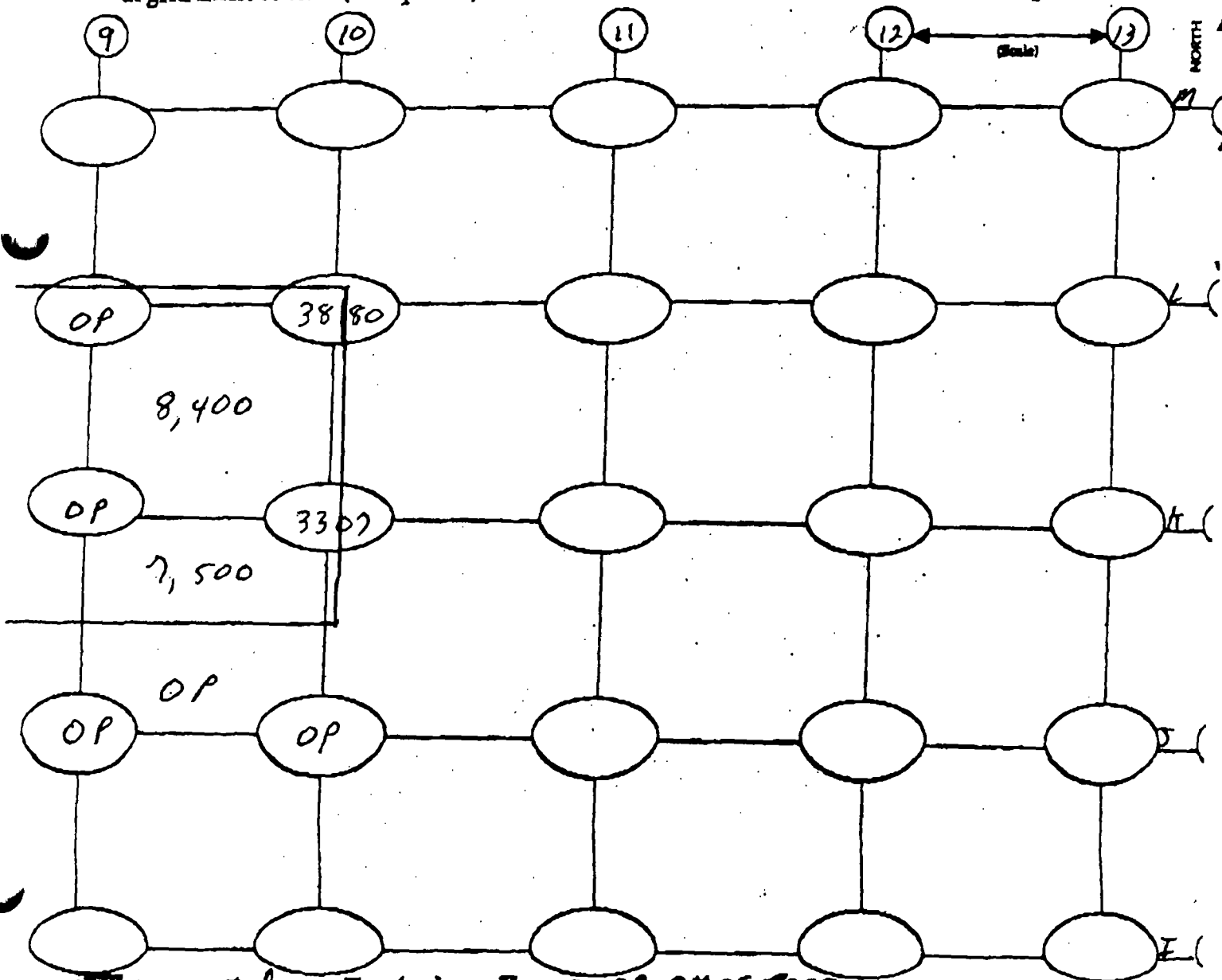
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 3'

Background 3K - 8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Person
--- Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 7

Date 8-28-02

Technician L D Smith
meter # Probe 3

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

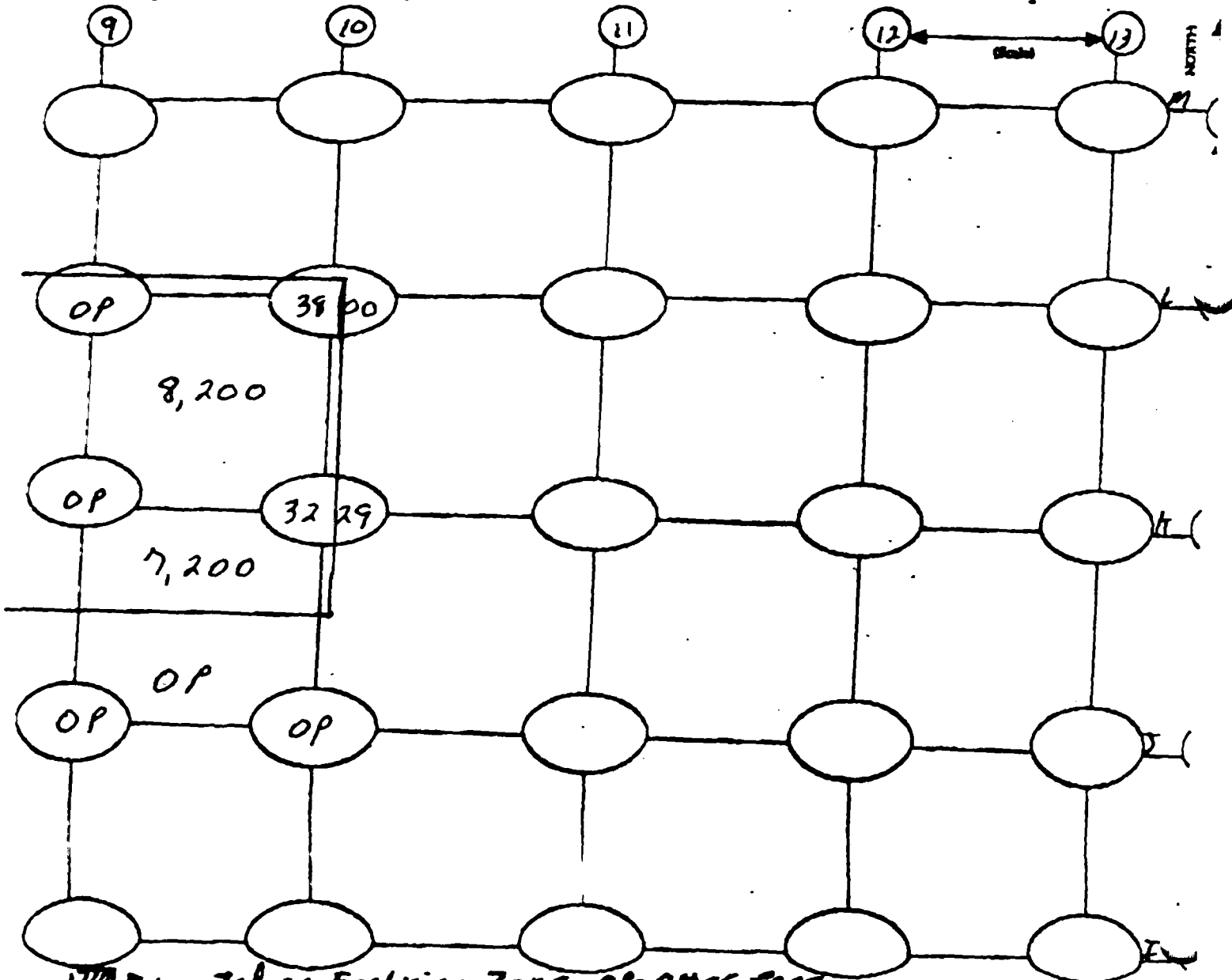
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not Shielded ☒

Lift Elevation -4.5'

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP OP OP OP OP
Exc - Exclusion zone boundary NE = Not Excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 2

Date 8-28-02

Technician L D Smith
meter # Probe 2

Inst. Model Ludlum 2221

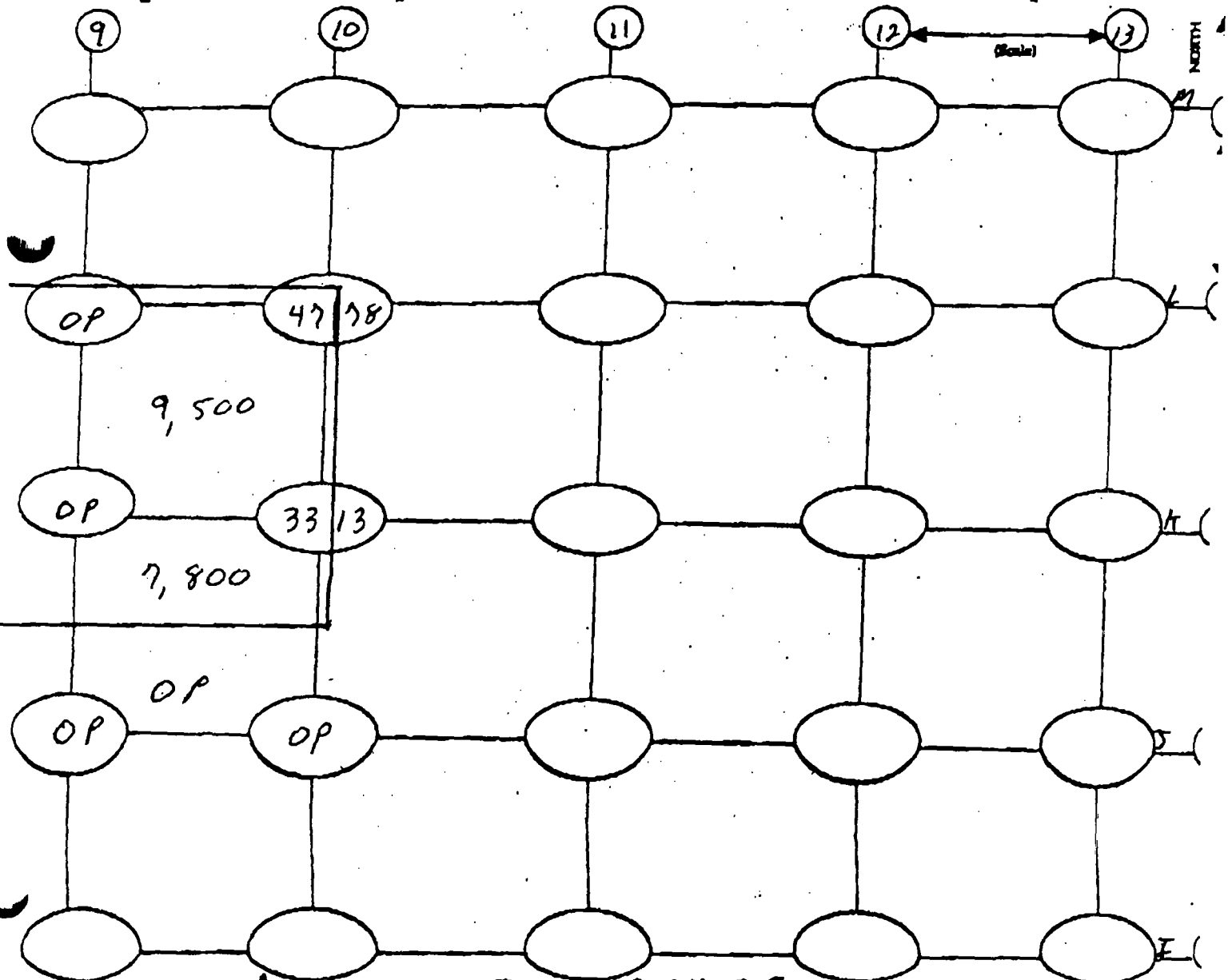
Serial No. 126496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 3K-8K cpm. Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP = Over Penetration
X - Exclusion zone boundary NE = Not excavated SL = Slope



Date 8-28-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

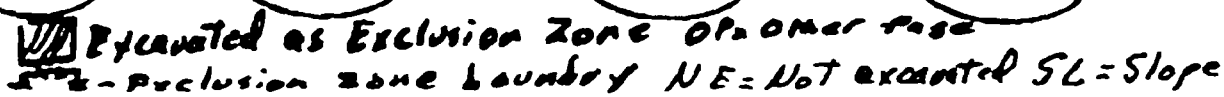
Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded

Lift Elevation - 7.5'

Background 3A-8A cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 7 of 7

Date 8-29-02

Technician L D Smith

meter #

Probe #

Inst. Model Ludlum 2221

Serial No. 126496

168143

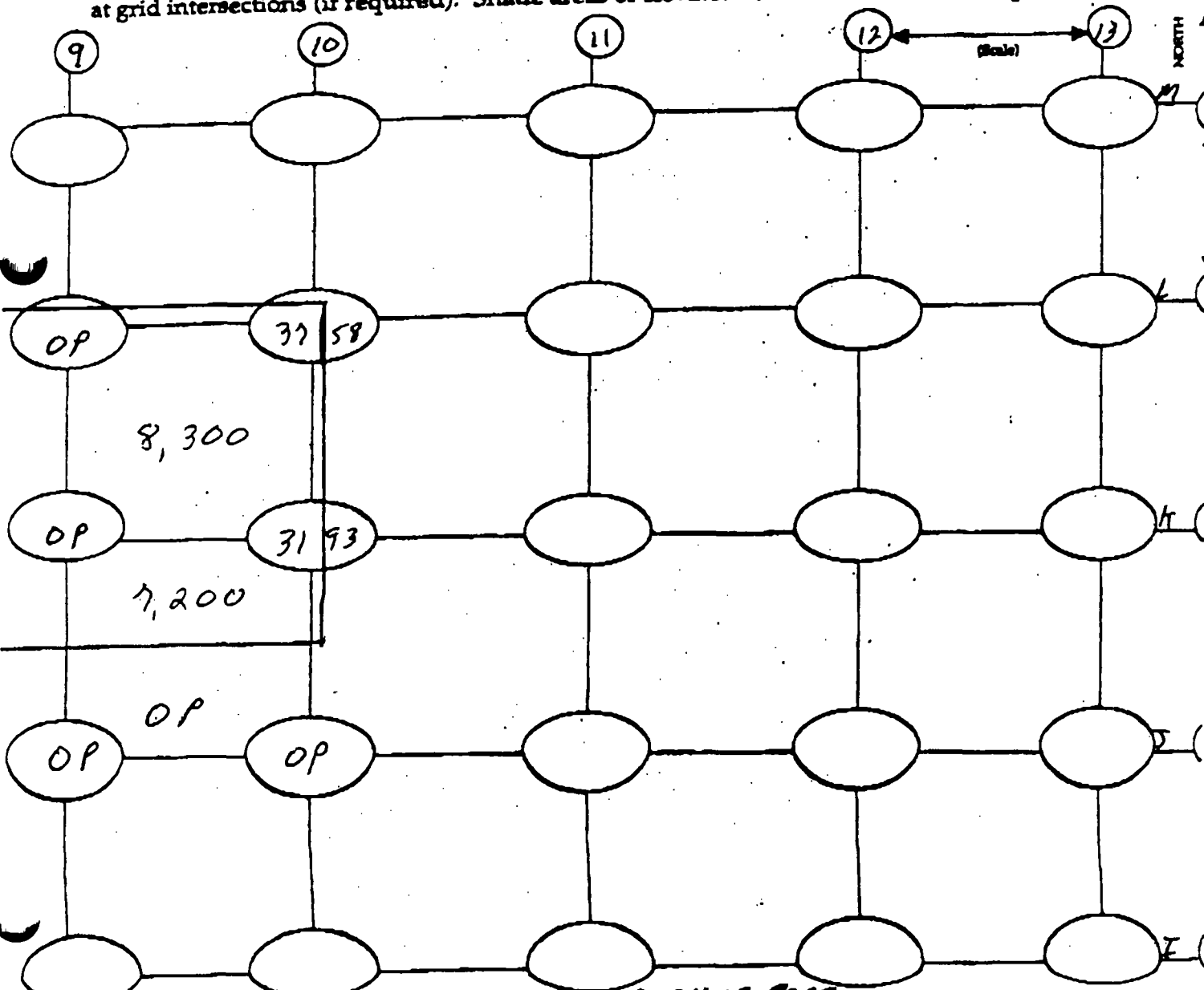
Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not Shielded


Lift Elevation - 9'

Background 3K - 8K cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OP = Other Phase
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 8-23-02

Technician L D Smith

Inst. Model Ludlum 2221

meter #	Probe #
Serial No. 126496	168143

Serial No. 126496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

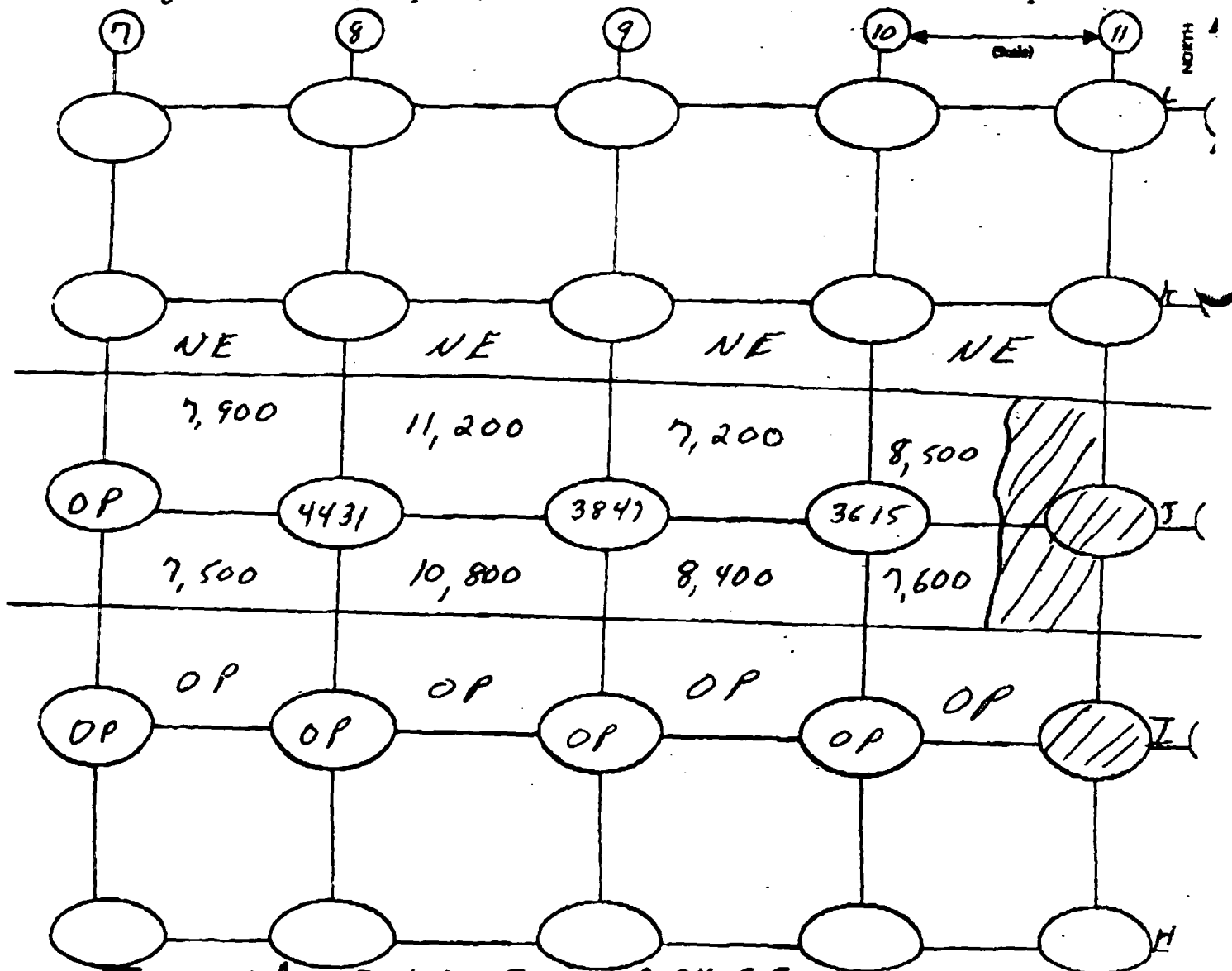
Shielded ☒ Not Shielded


Lift Elevation Surface

Background 4A + 8A cpm

Action Level: 20680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone of 0.0m or less
--- Exclusion zone boundary NE = Not excavated SL = Slope

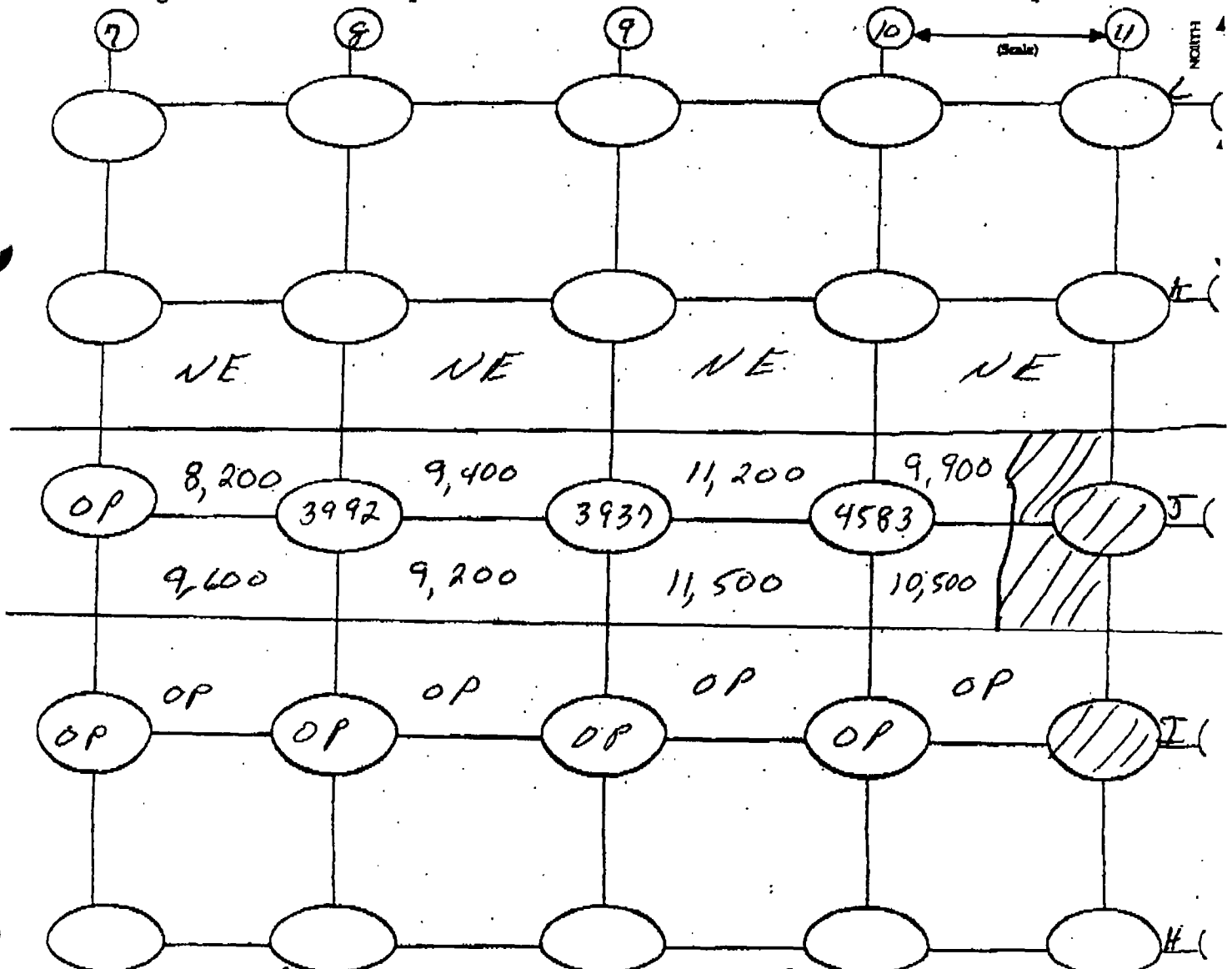


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 2 of 6Date 8-23-02Technician L D SmithInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 4.5-8.4 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Penetration
 - - - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

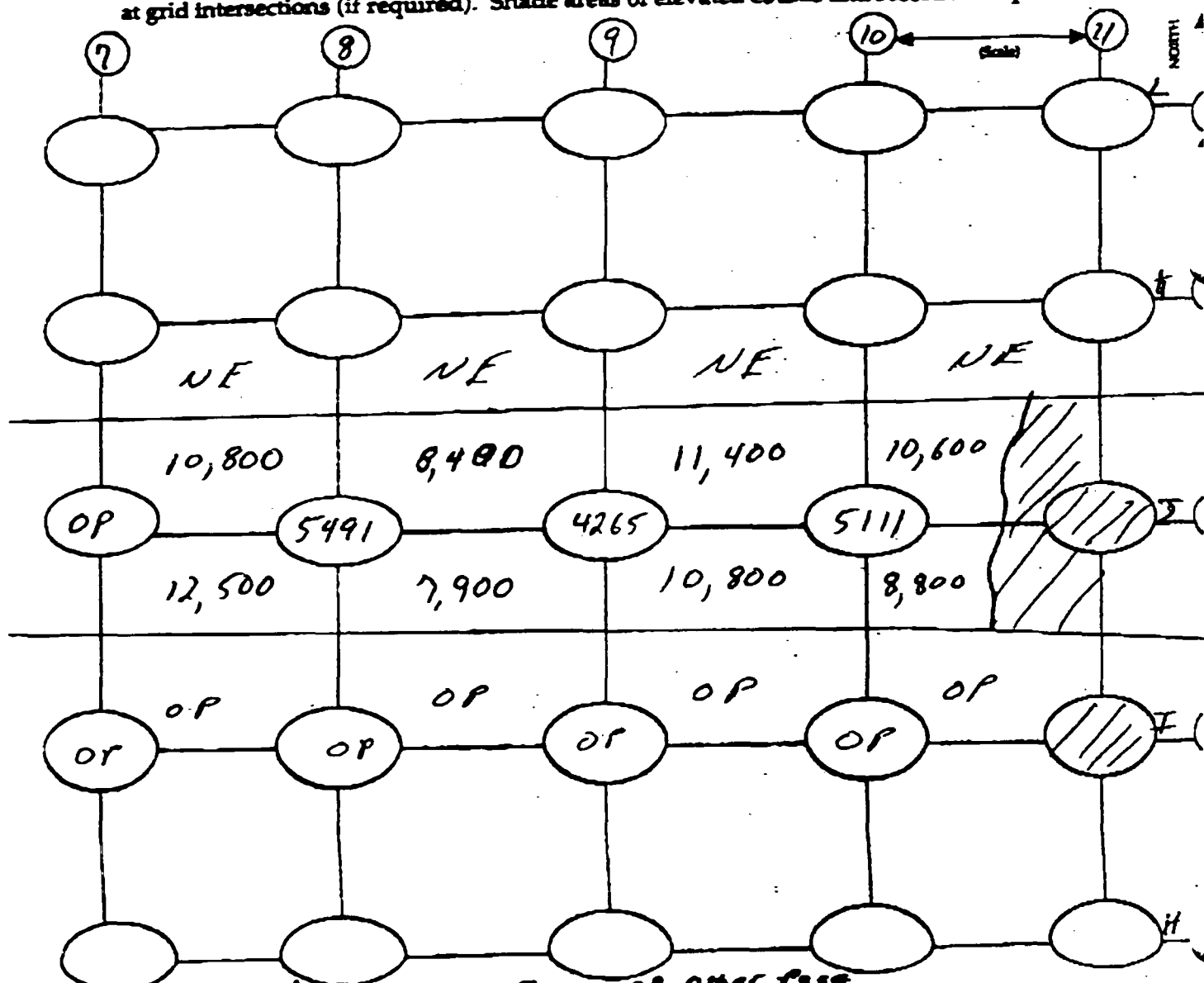
 Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 8-23-02Technician L.D. SmithInst. Model Ludlum 2221
 Meter # 126496 Probe # 168143
 Serial No.

 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation -3Background 4A-8A cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.


 Excluded as Exclusion Zone OP = Over Pass
 Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 4 of 6

Date

8-23-02Technician L D Smith

Inst. Model

Ludlum 2221

Serial No.

meter #Probe #126496168143

Probe Type:

1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation

-4.5'

Background

4K-8K

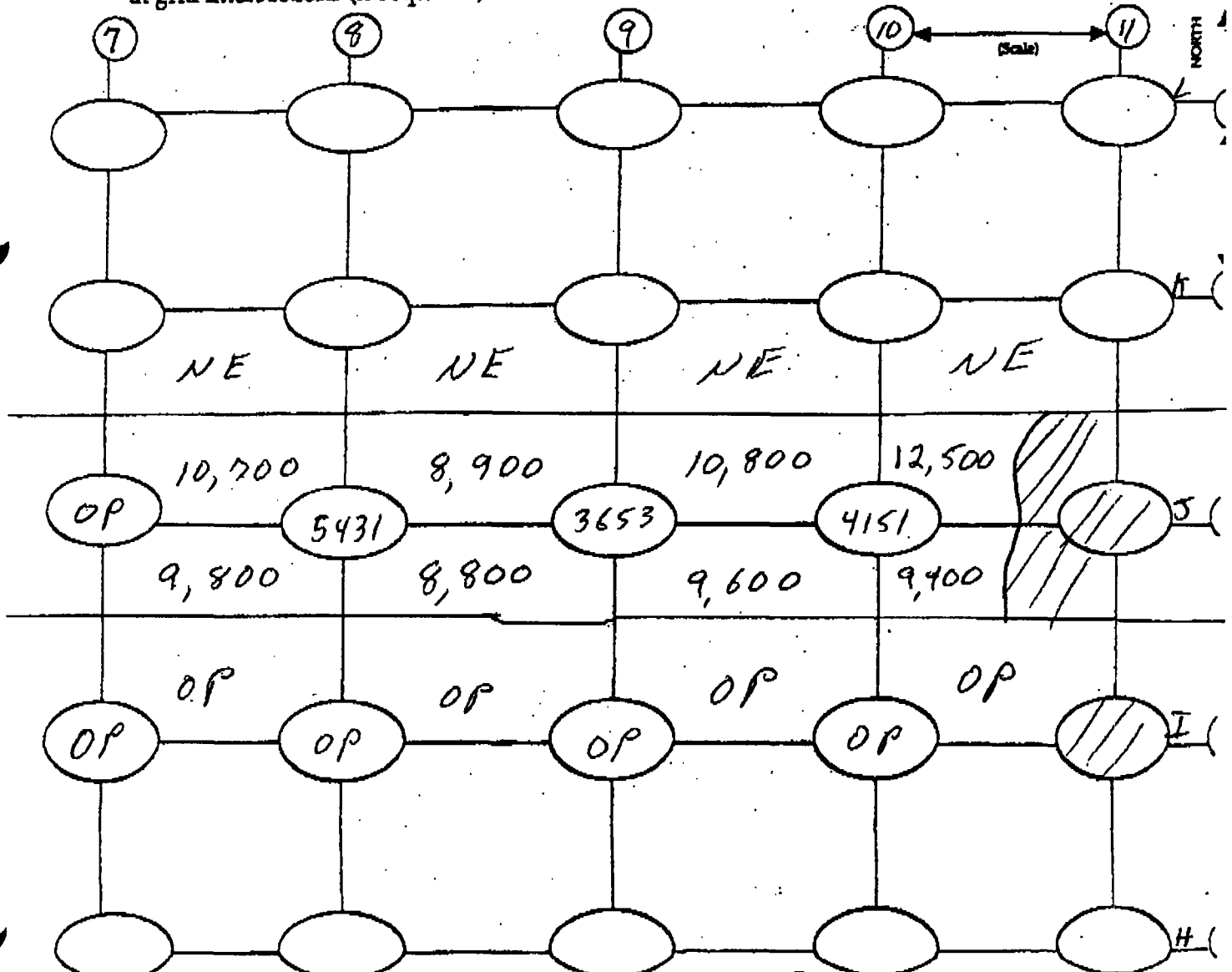
cpm

Action Level

29,680

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
SL = Slope
NE = Not excavated



RADIATION SURVEY FORM

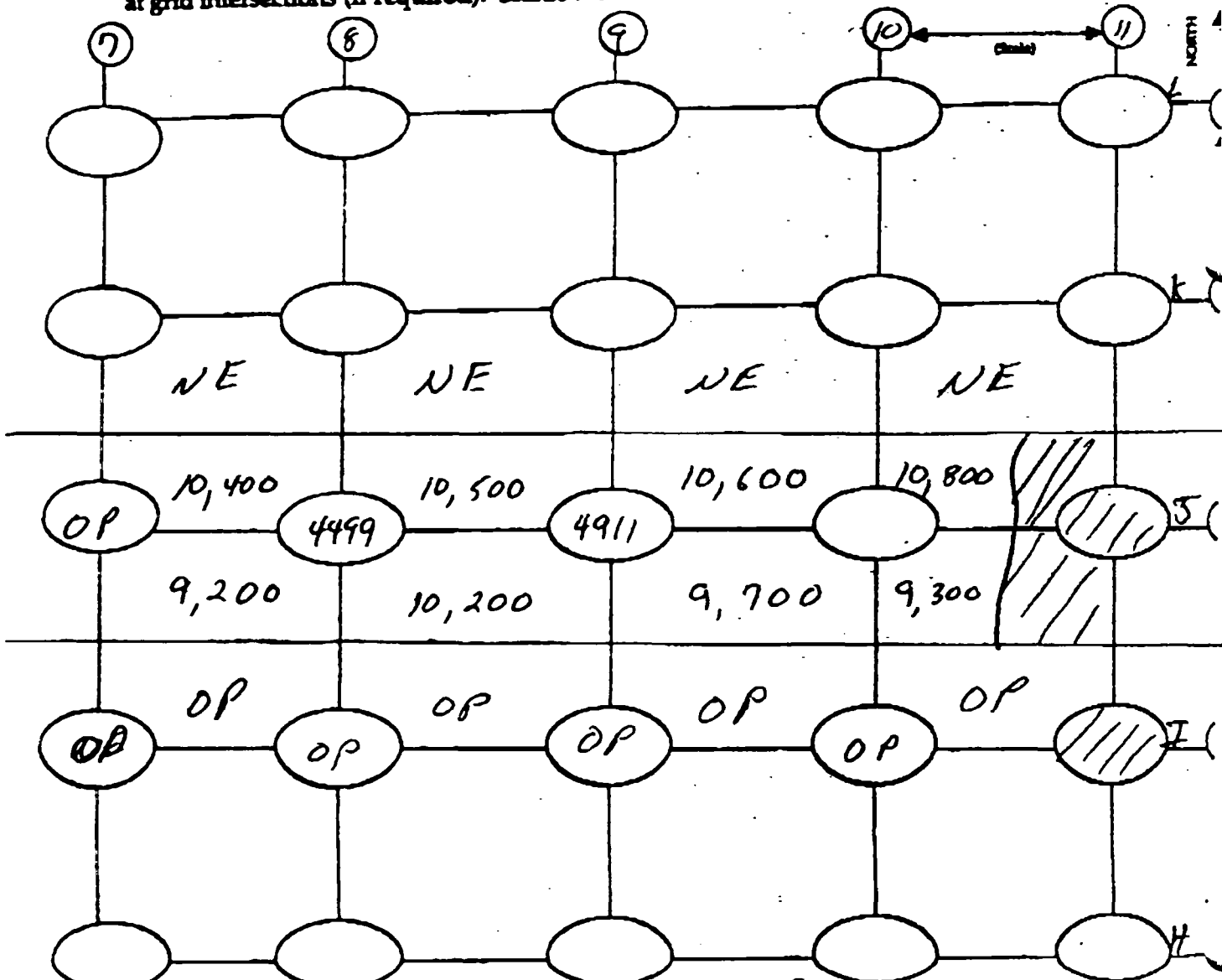
 Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 8-23-02Technician IO S. H.Inst. Model Ludlum 2221
 meter # 126496 Probe # 168193
 Serial No.

 Probe Type: 1'x1" NaI / 2'x2" NaI
 Shielded / Not Shielded
Lift Elevation -6'Background 4k - 8k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other page
 - Exclusion zone boundary NE = Not excavated SL = Slope

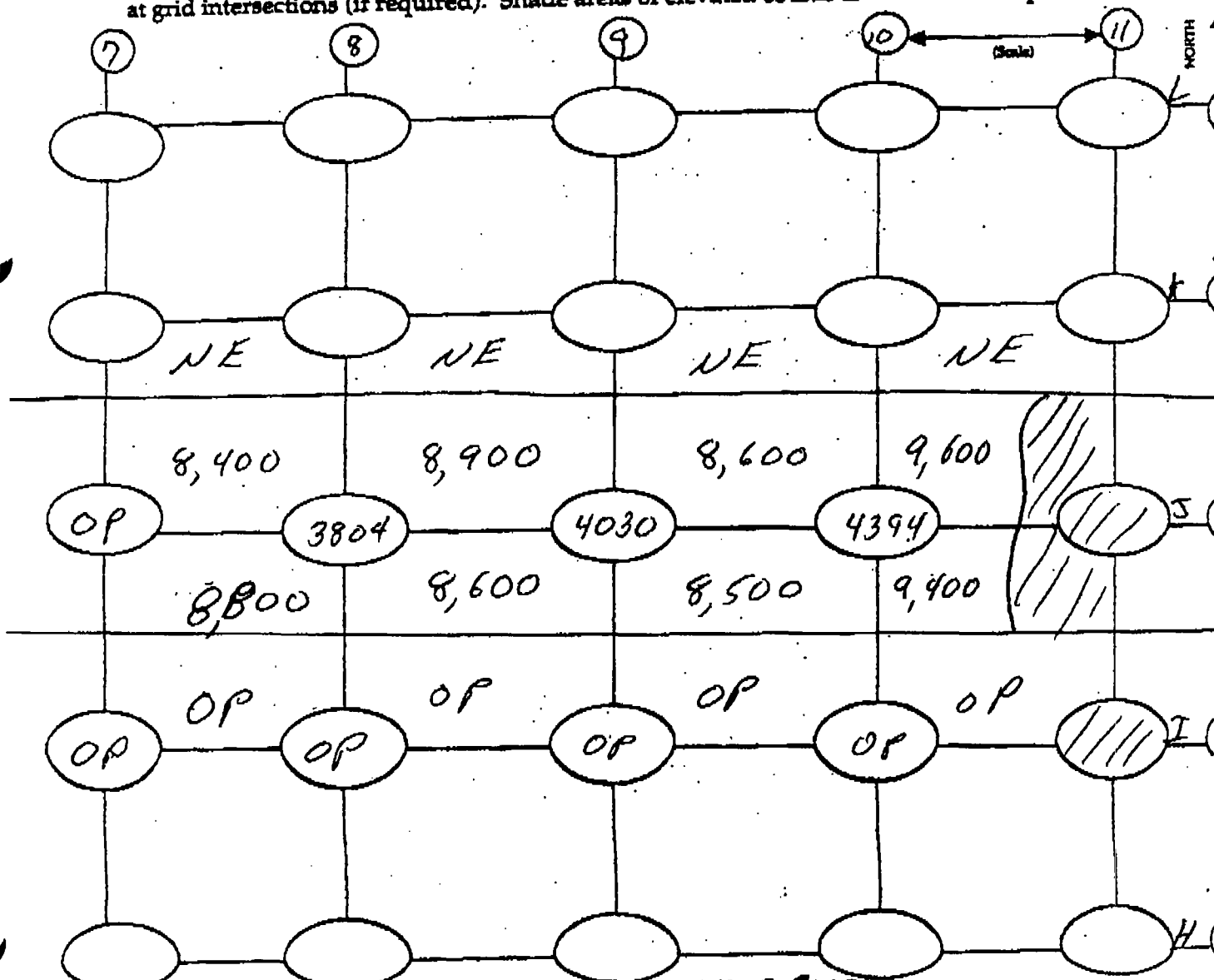


STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 6Date 8-23-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 4k-8k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 7

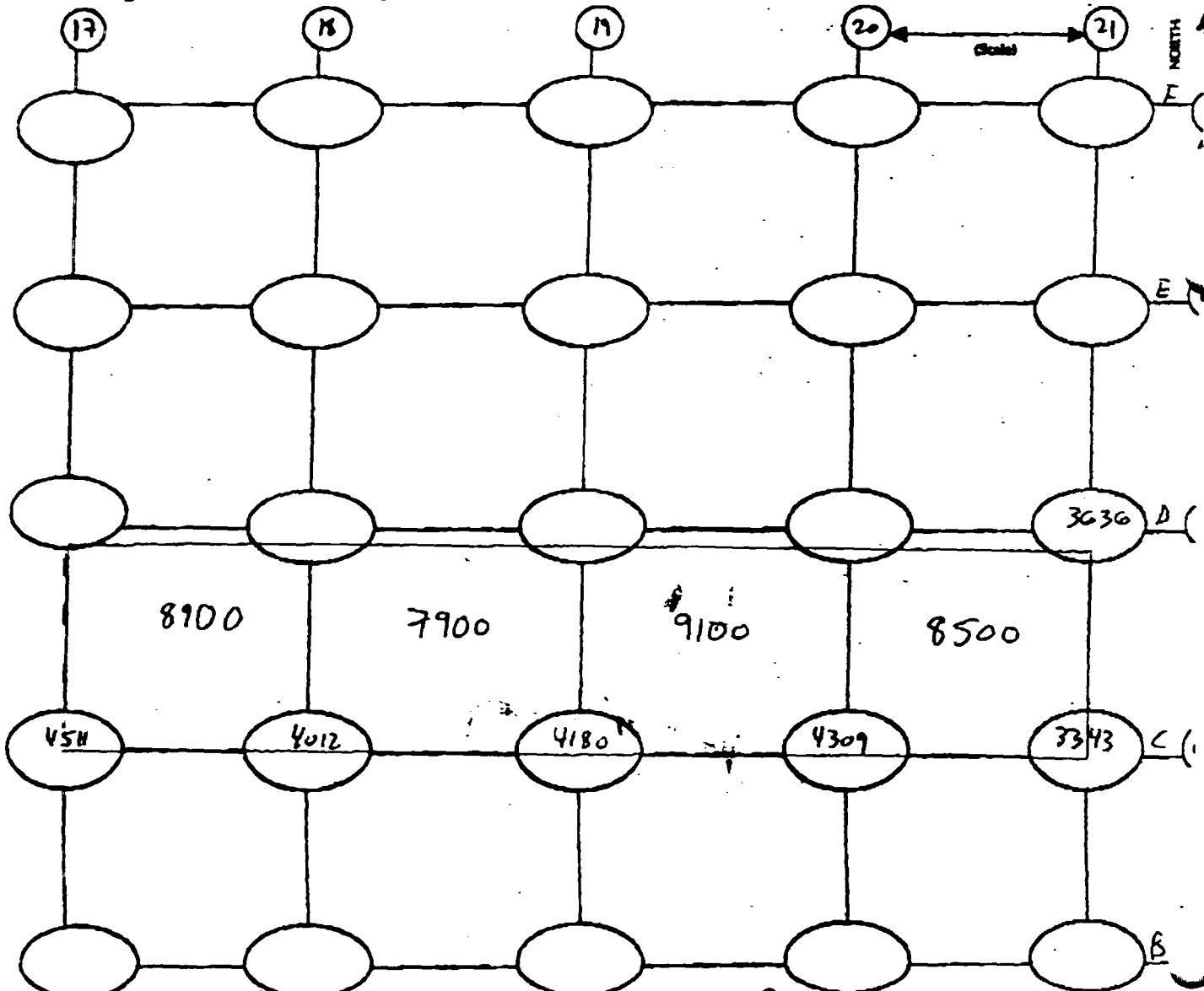
STS Consultants Ltd.

Date 8/26Technician Tony ShavenInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>132844</u>	<u>PA162149</u>

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 9K-14K' unshielded cpmAction Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of 20m or more
 ... boundary NE = Not excavated SL = Slope

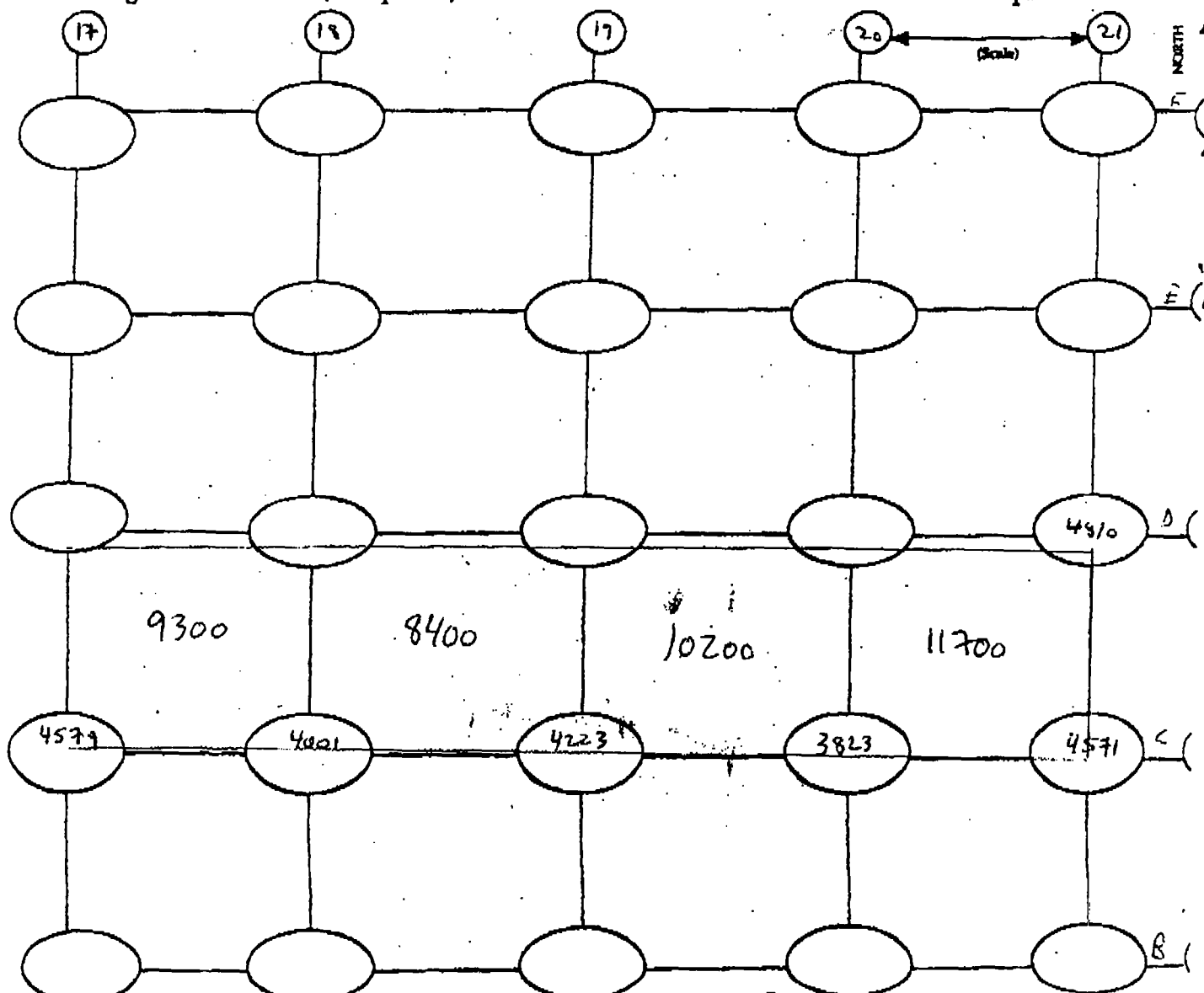


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 2 of 7Date 6/20Technician Toby ShewanInst. Model Ludlum 2221meter # 132744 Probe # PA16843Serial No. 132744Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 9K-14K unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone DP=0mer pass
 NE=Not excavated SL=Slope



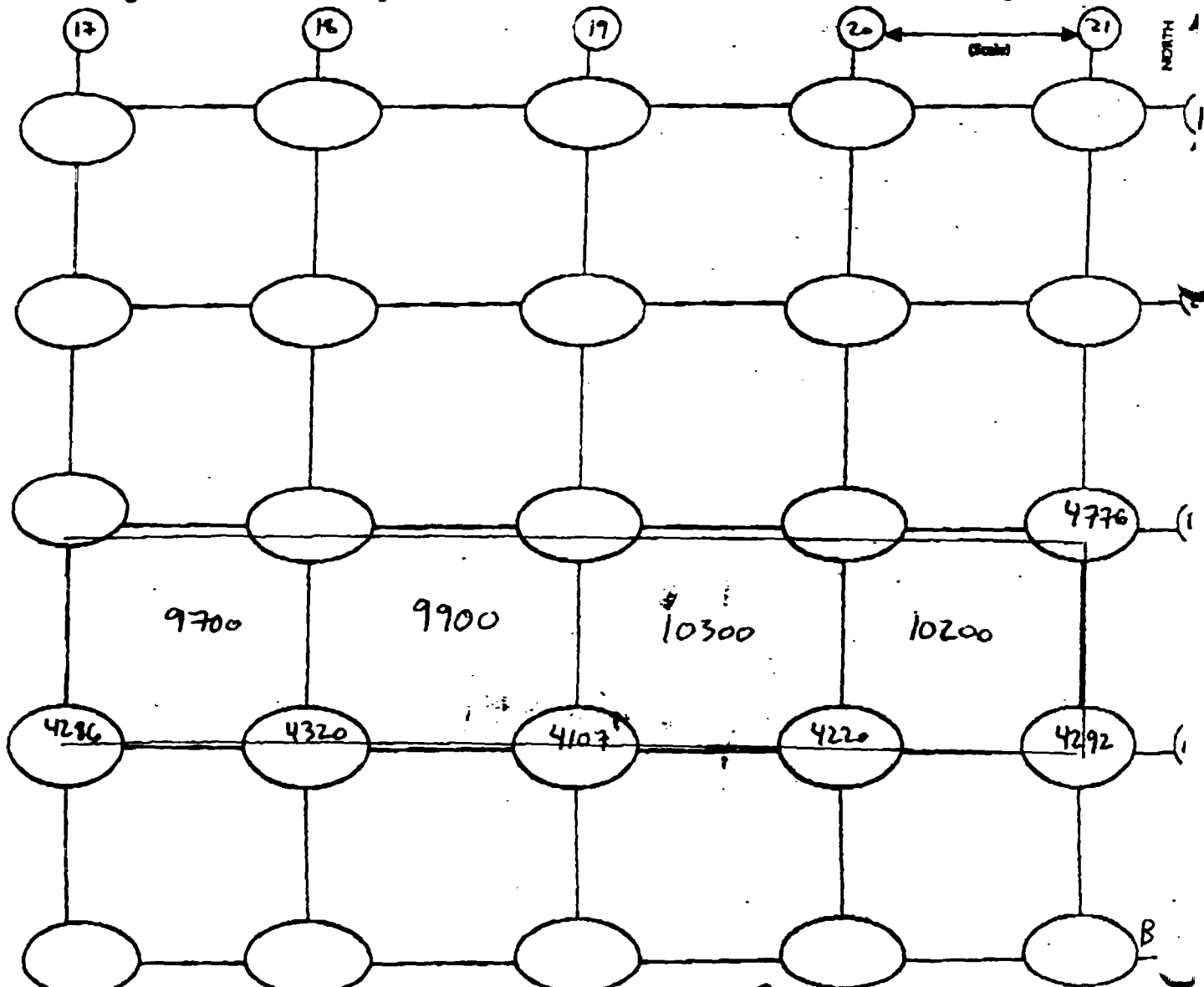
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 7

STS Corporation, Ltd.

Date 8/26Technician Toby ShewenInst. Model Ludlum 2221meter # 132844 Probe # PK8149Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 3K - 14K unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Page
 NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 7

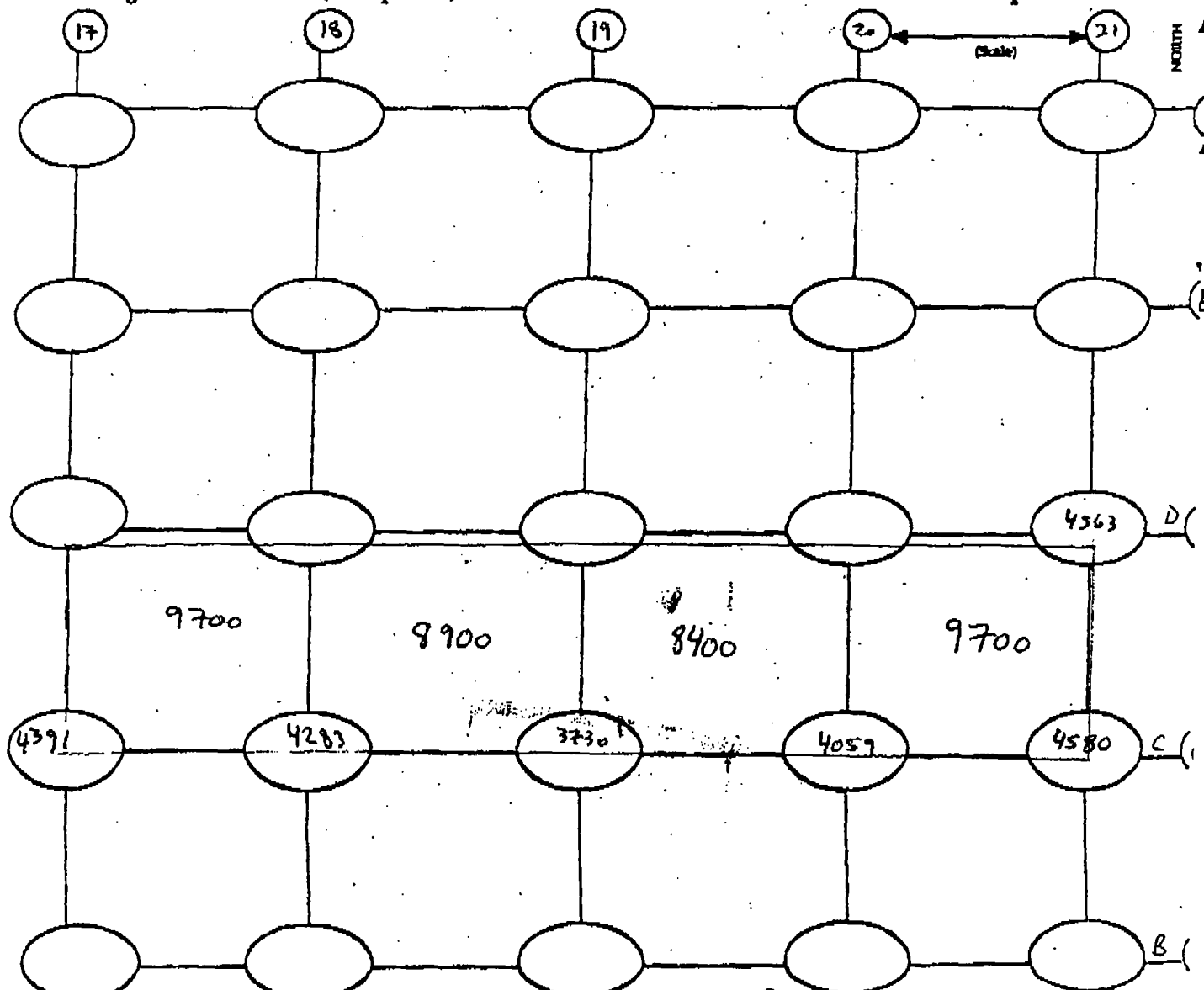
STS Consultants, Ltd.

Date 6/20Technician Toby ShevanInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>132844</u>	<u>PA168144</u>

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 9K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP-0mer Page
LAKE Boundary NE=Not excavated SL=Slope



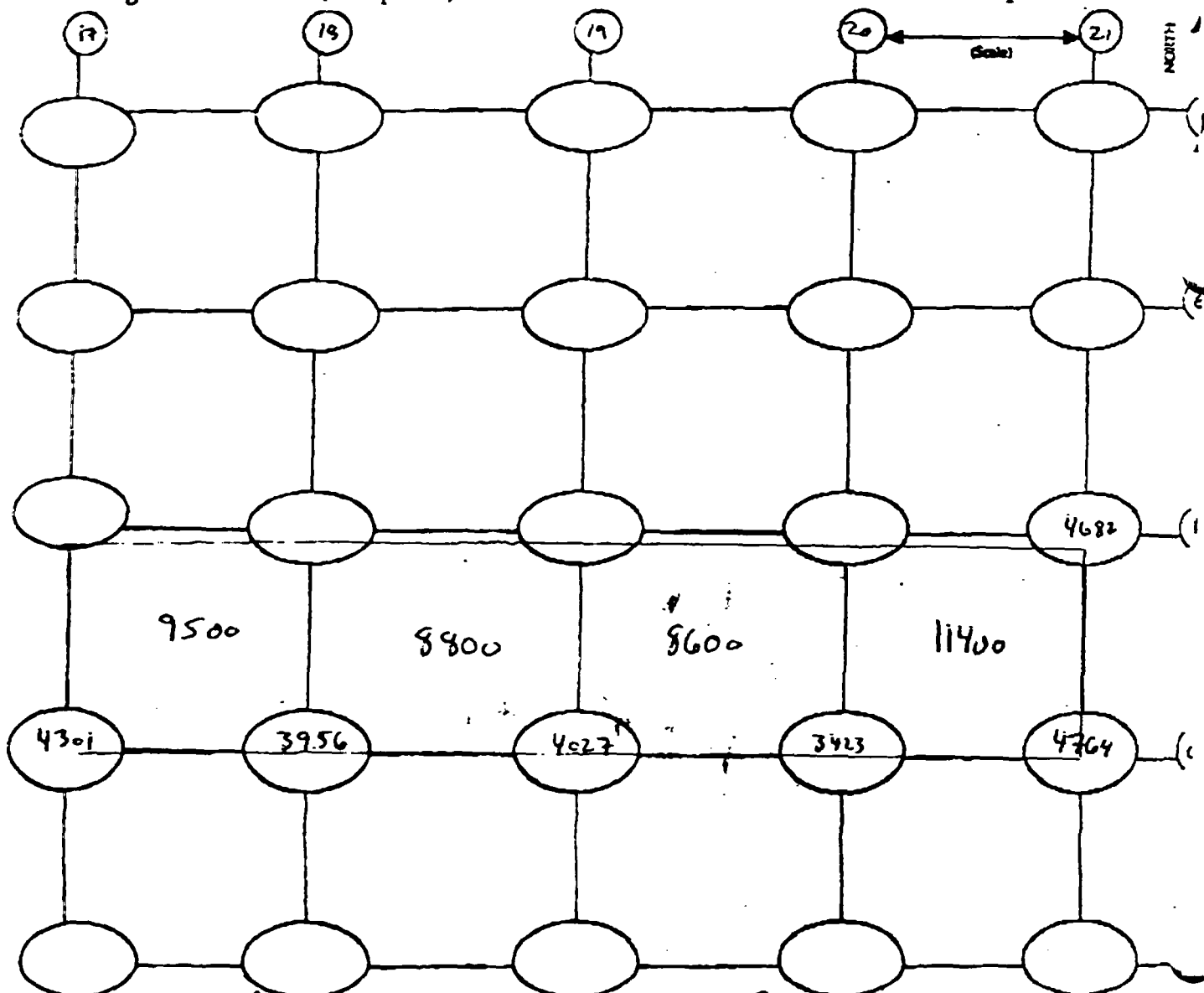
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 7

STS Consultants, Ltd.

Date 8/26Technician Toby SheehanInst. Model Ludlum 2221meter # 132844 Probe # 1K168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background SL - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Page
☐ Exclusion Zone boundary NE: Not excavated SL: Slope



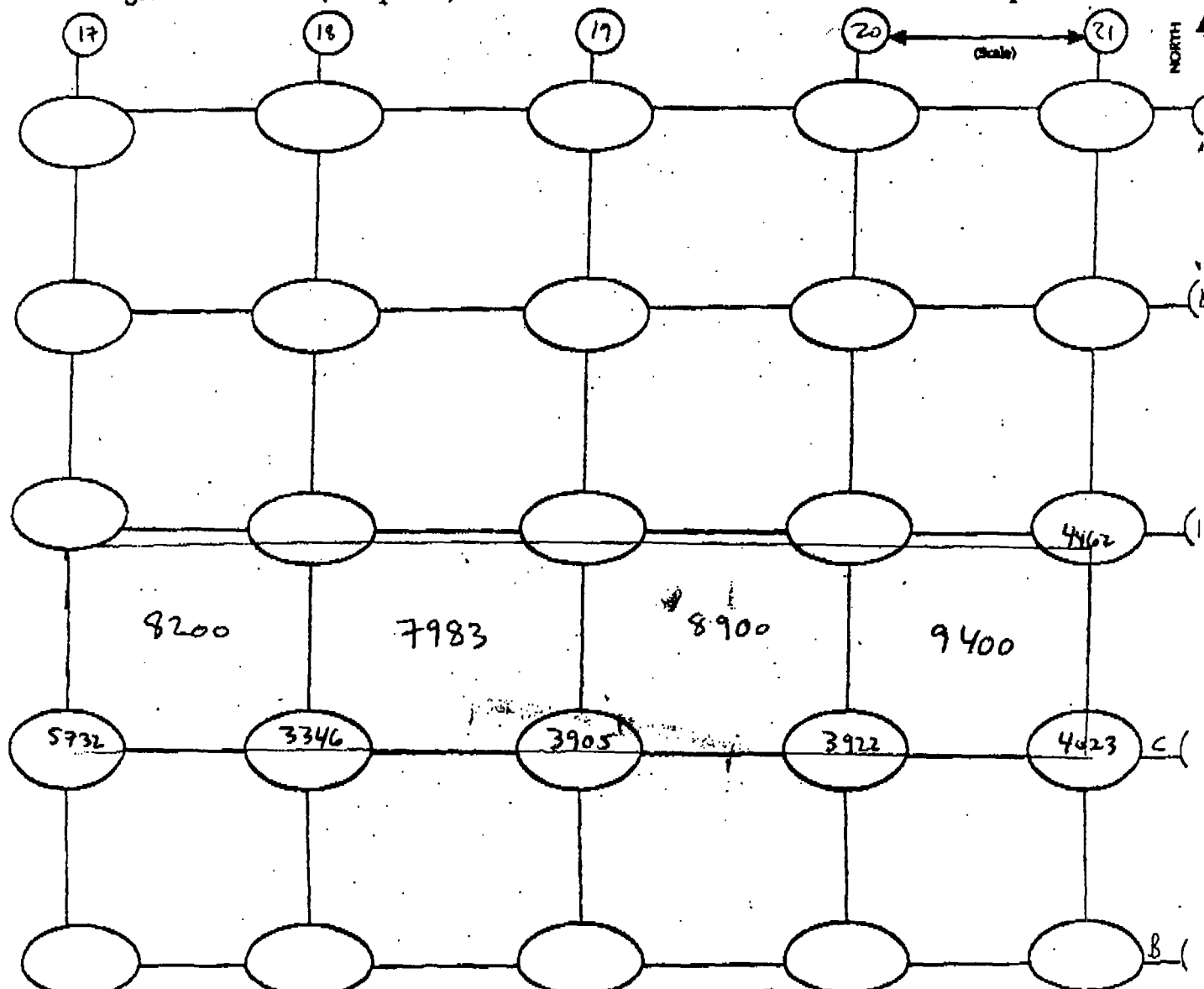
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 7

STS Consultants, Ltd.

Date 8/20Technician Toby ShewanInst. Model Ludlum 2221meter # 132944 Probe # 1R163148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5Background 8K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of Omar Pass
Laundry NE = Not excavated SL = Slope



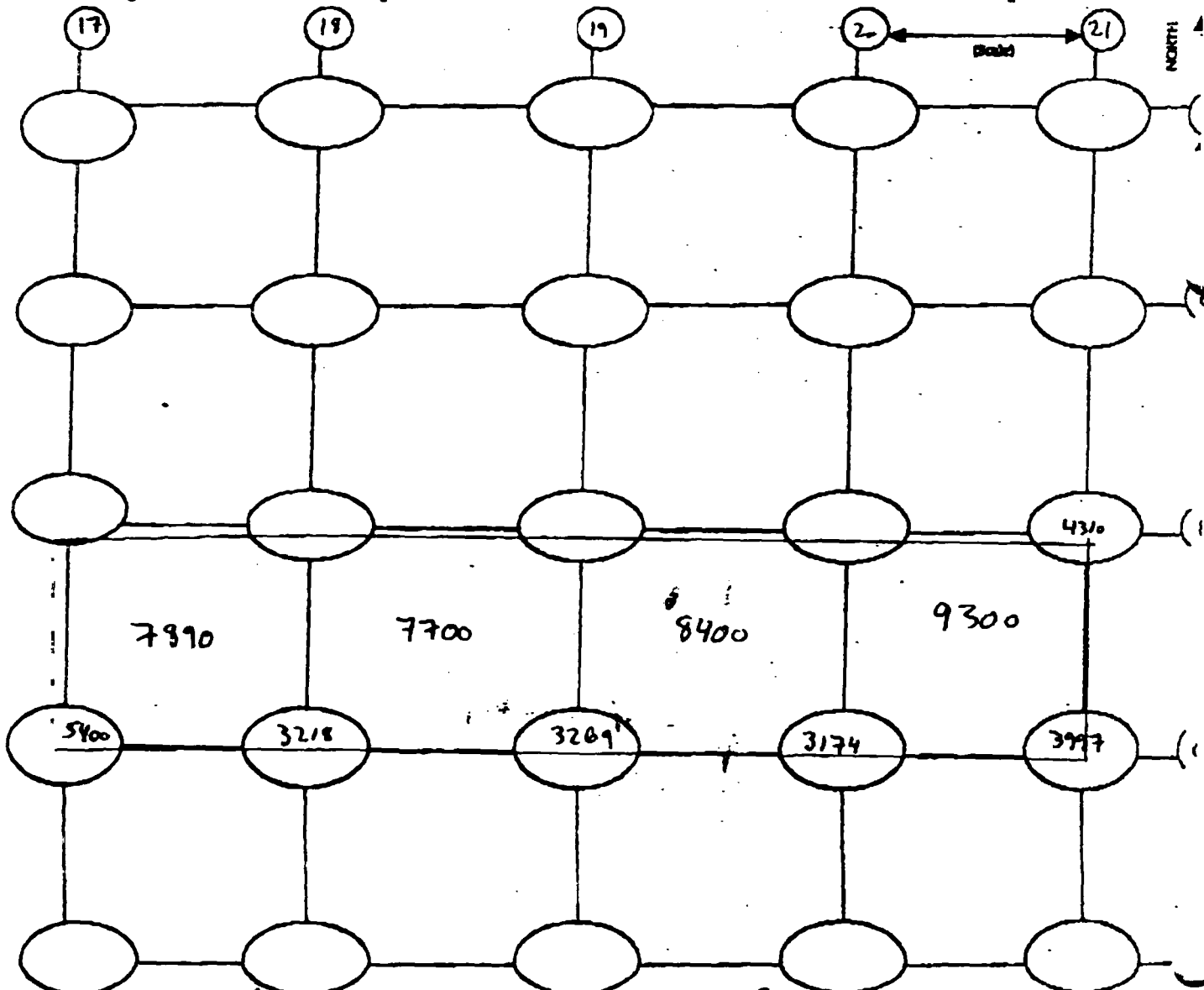
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 7 of 7

STS Consultants, Ltd.

Date 8/26Technician Toby ShewanInst. Model Ludlum 2221meter # 132944 Probe # 12168148Serial No. 132944 12168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -9'Background 9K-14' F cpm Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Omar Pass
 NE = Not excavated SL = Slope

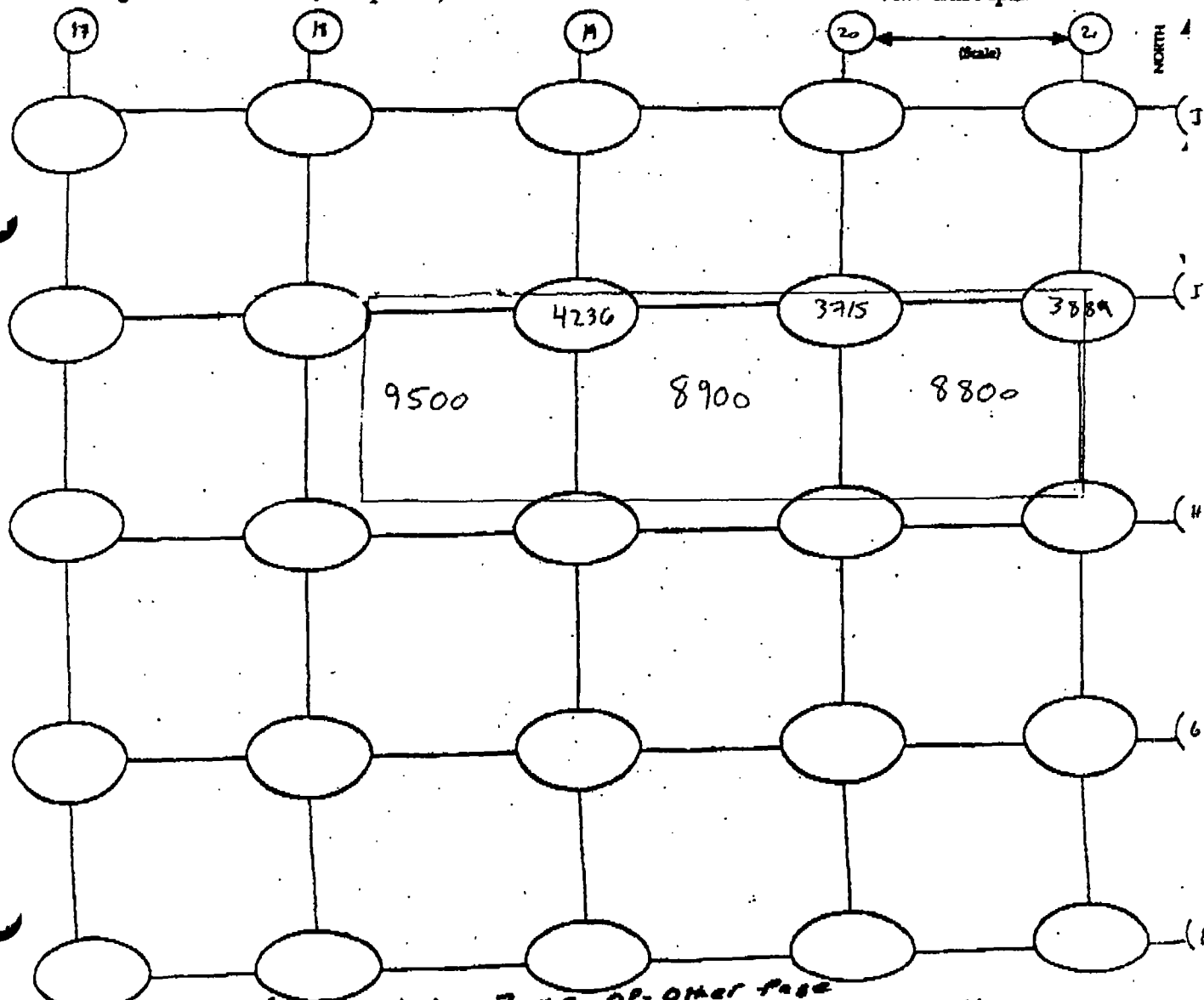


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 1 of 6Date 6/12 - 8/13Technician Toby ChavanInst. Model Ludlum 2221Serial No. 132844 / PR169148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 8k - 14k unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other phase
 NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 6

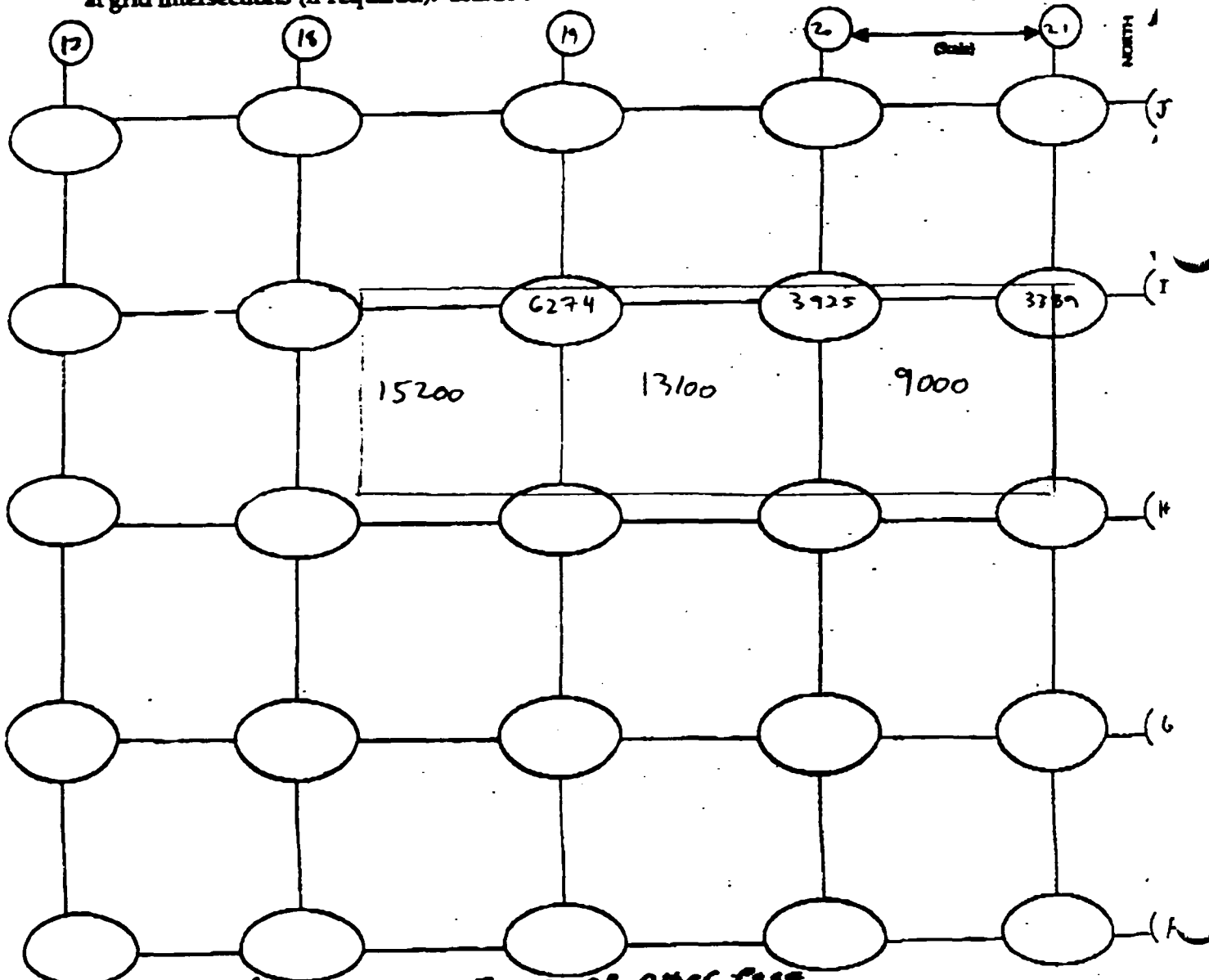
STS Consultants, Ltd.

Date 8/12 - 8/13Technician Toby ShavenInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>132344</u>	<u>15168143</u>

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background Sk - 14k unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other use
☐ Exclusion zone boundary NE = Not excavated SL = Slope



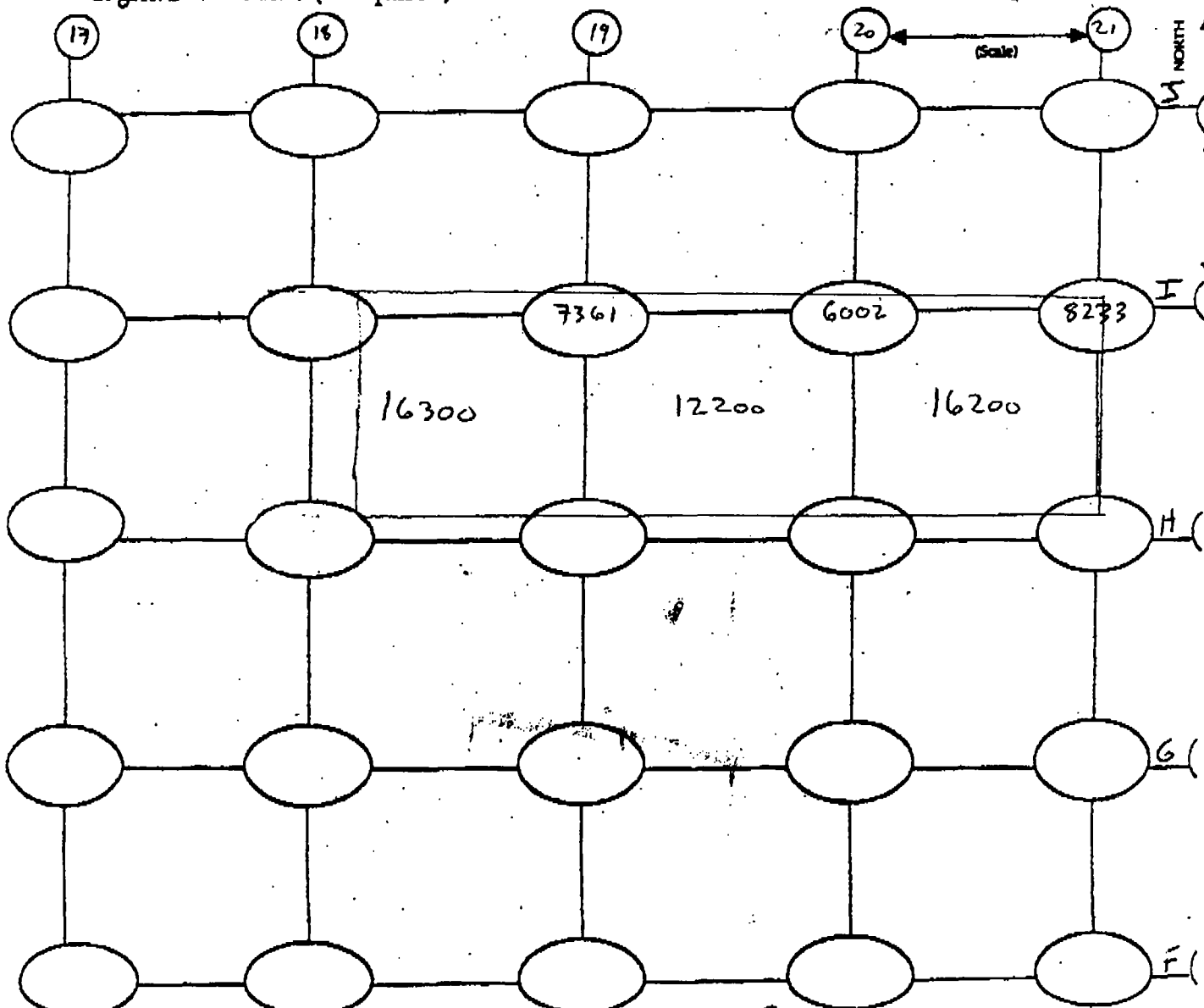
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 7/12 - 8/13Technician Toby ShewanInst. Model Ludlum 2221meter # Probe 33
Serial No. 132844 PR168149Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 9K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other phase
 - Exclusion zone boundary NE = Not excavated SL = Slope



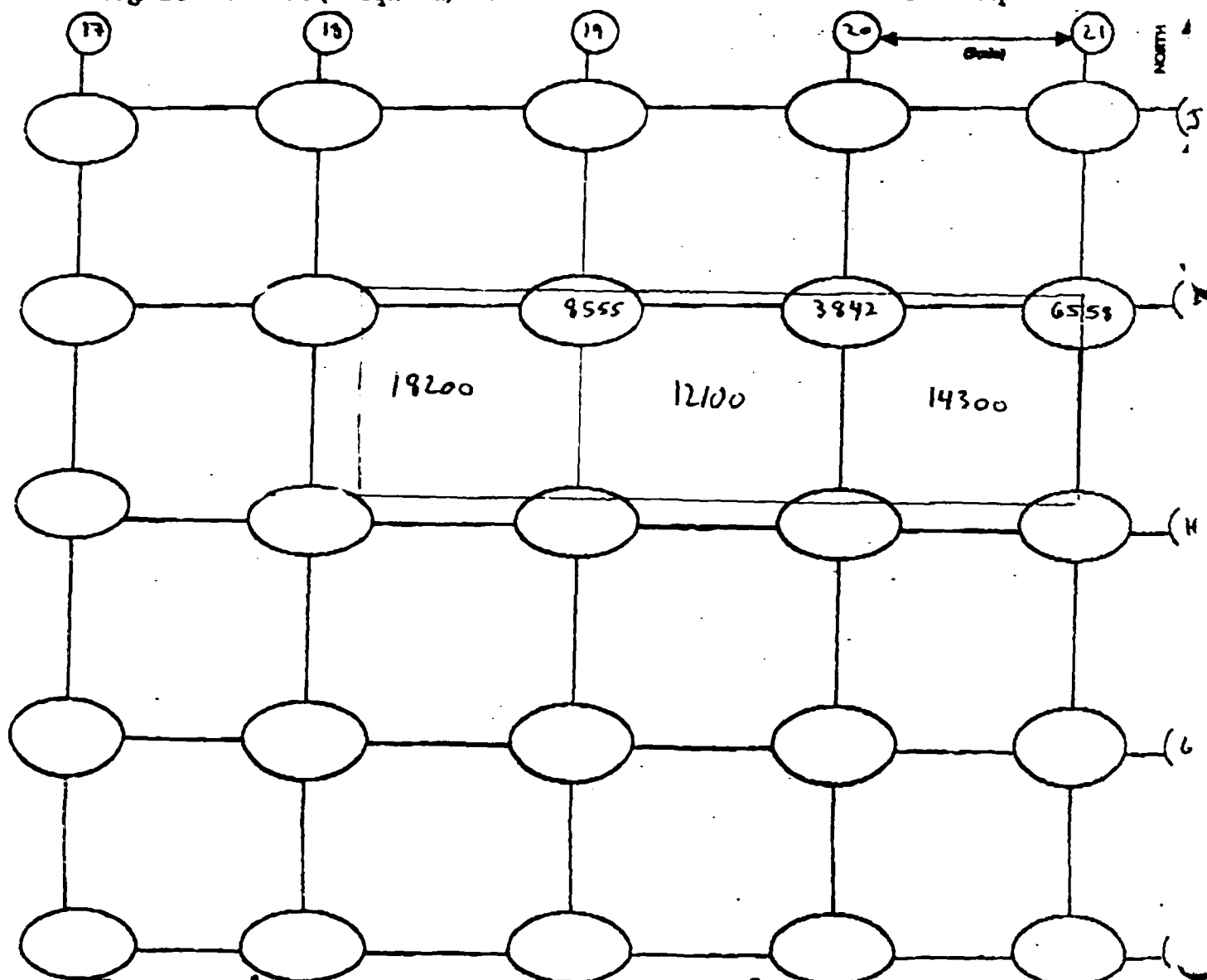
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/12 9/12Technician Toby ShumanInst. Model Ludlum 2221meter # Probe 33
Serial No. 132344 PRK9149Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 5K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone on other page
 SL = Preclusion zone boundary NE = Not excavated SL = Slope



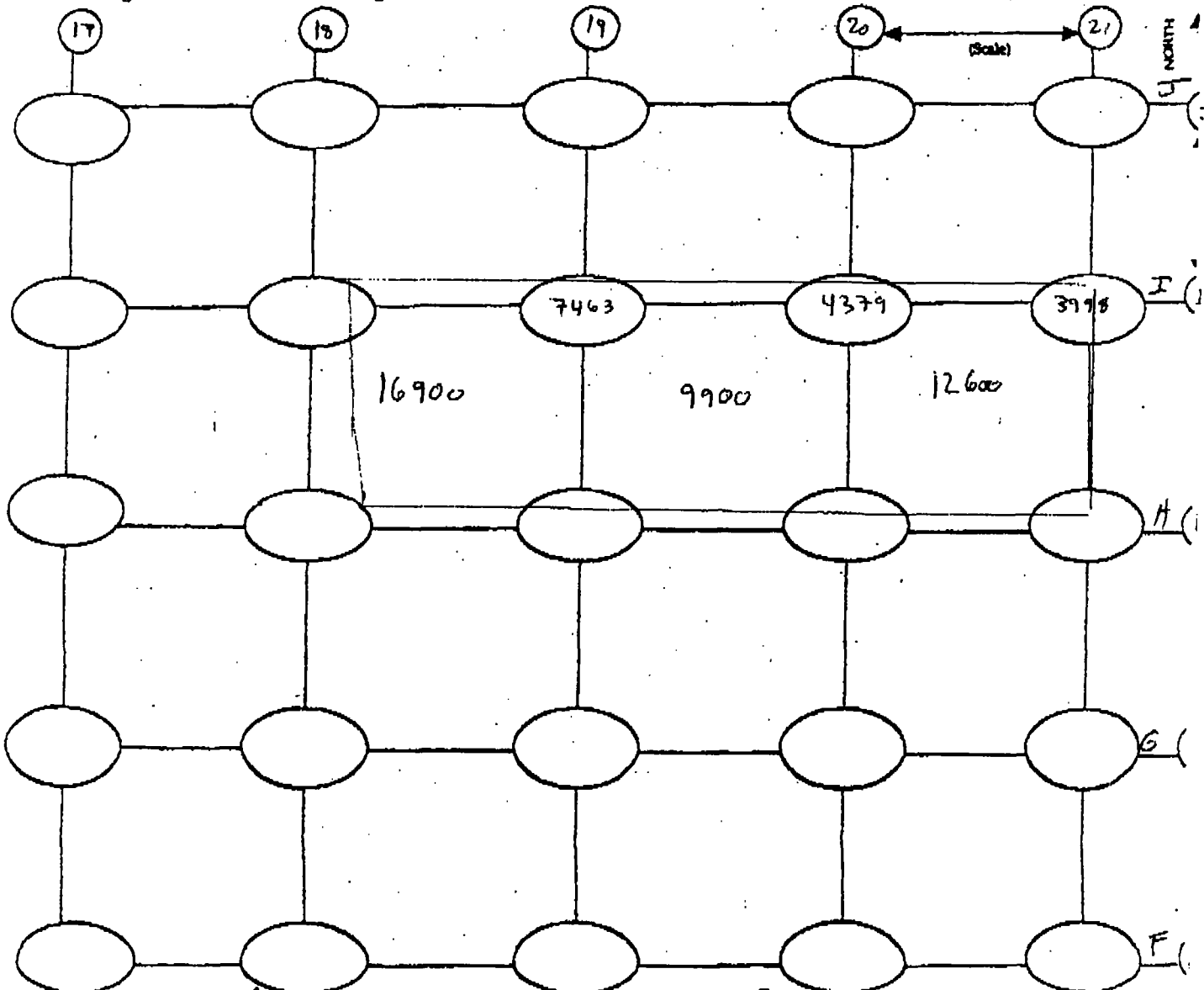
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/12 - 8/13Technician Toby ShewanInst. Model Ludlum 2221meter # Probe #
Serial No. 132344 PR168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 32 - 14k unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

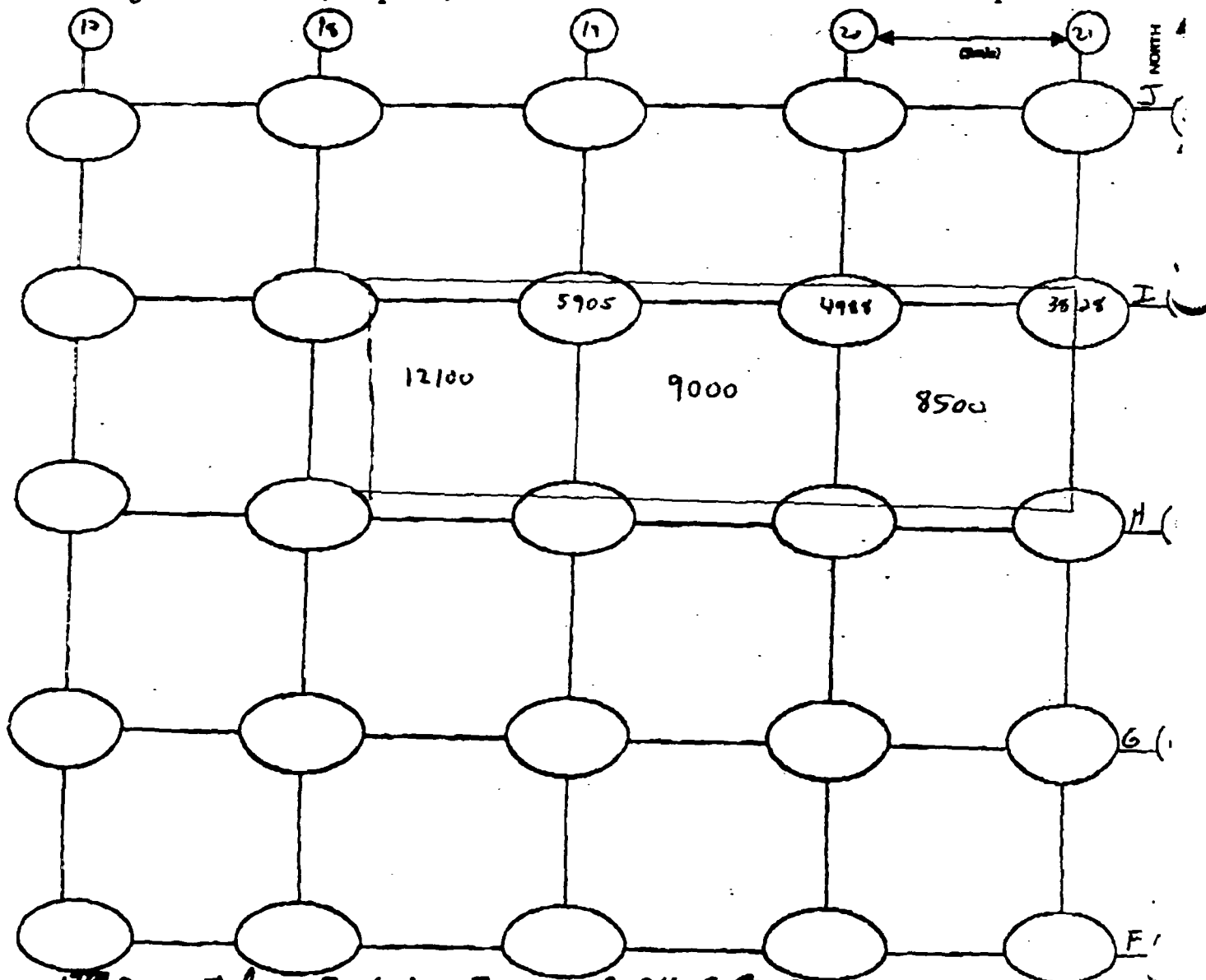
 Project # 25585-KI Project Name GMO Page 6 of 6

STS Consultants Ltd.

Date 8/16 - 8/17Technician Toby ShewenInst Model Ludlum 2221
 meter # 132544 Probe # RAK-143

 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -7.5'Background SA - NA - unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone per other page
 X - Exclusion zone boundary NE = Not excluded SL = Slope



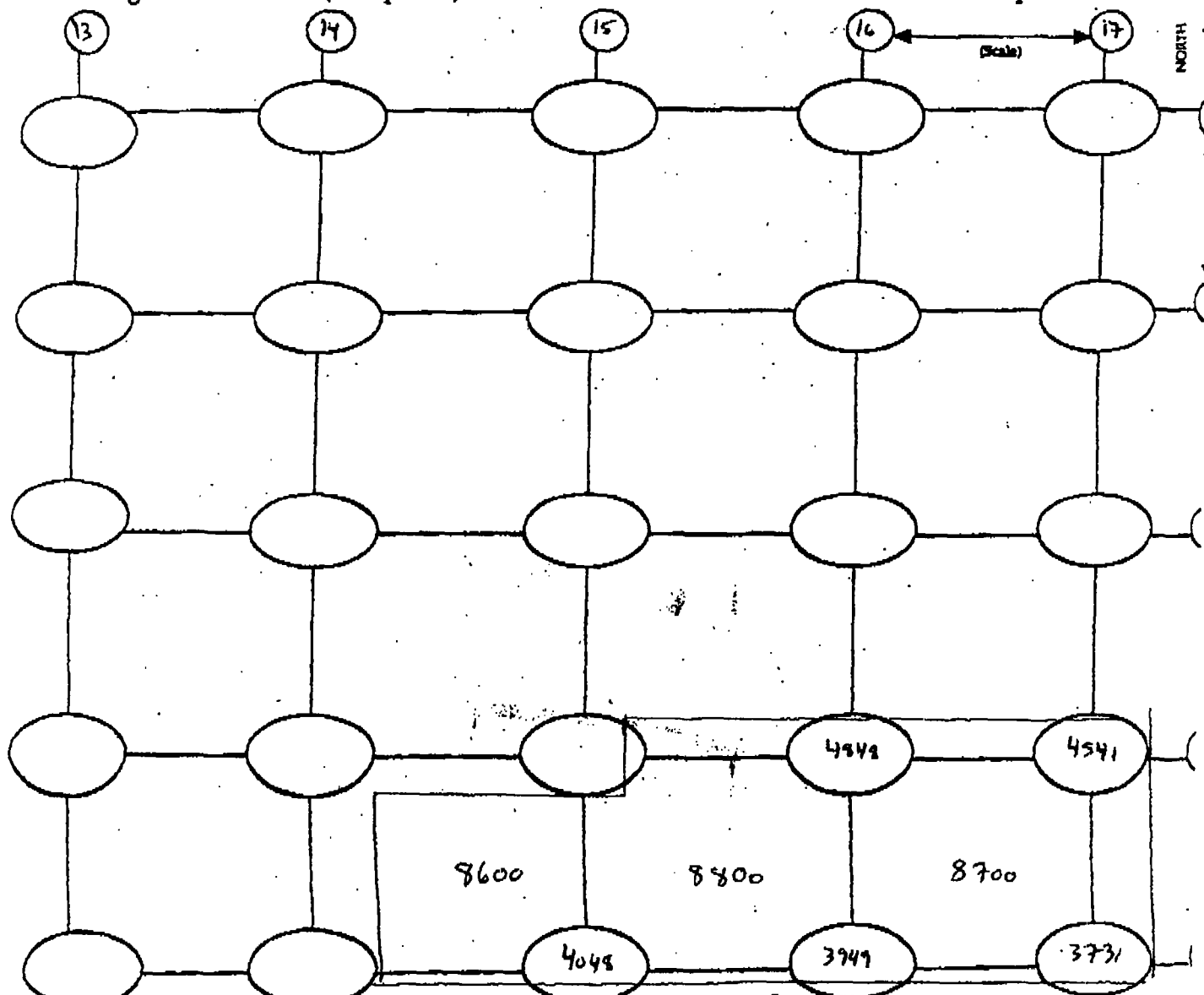
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 7

STS Consultants, Ltd.

Date 8/15 08/20 8/21Technician Toby SheltonInst. Model Ludlum 2221meter # 132844 Probe # PA168149Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation surfaceBackground 8K-14K cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Pass

NE = NOT excavated SL = Slope



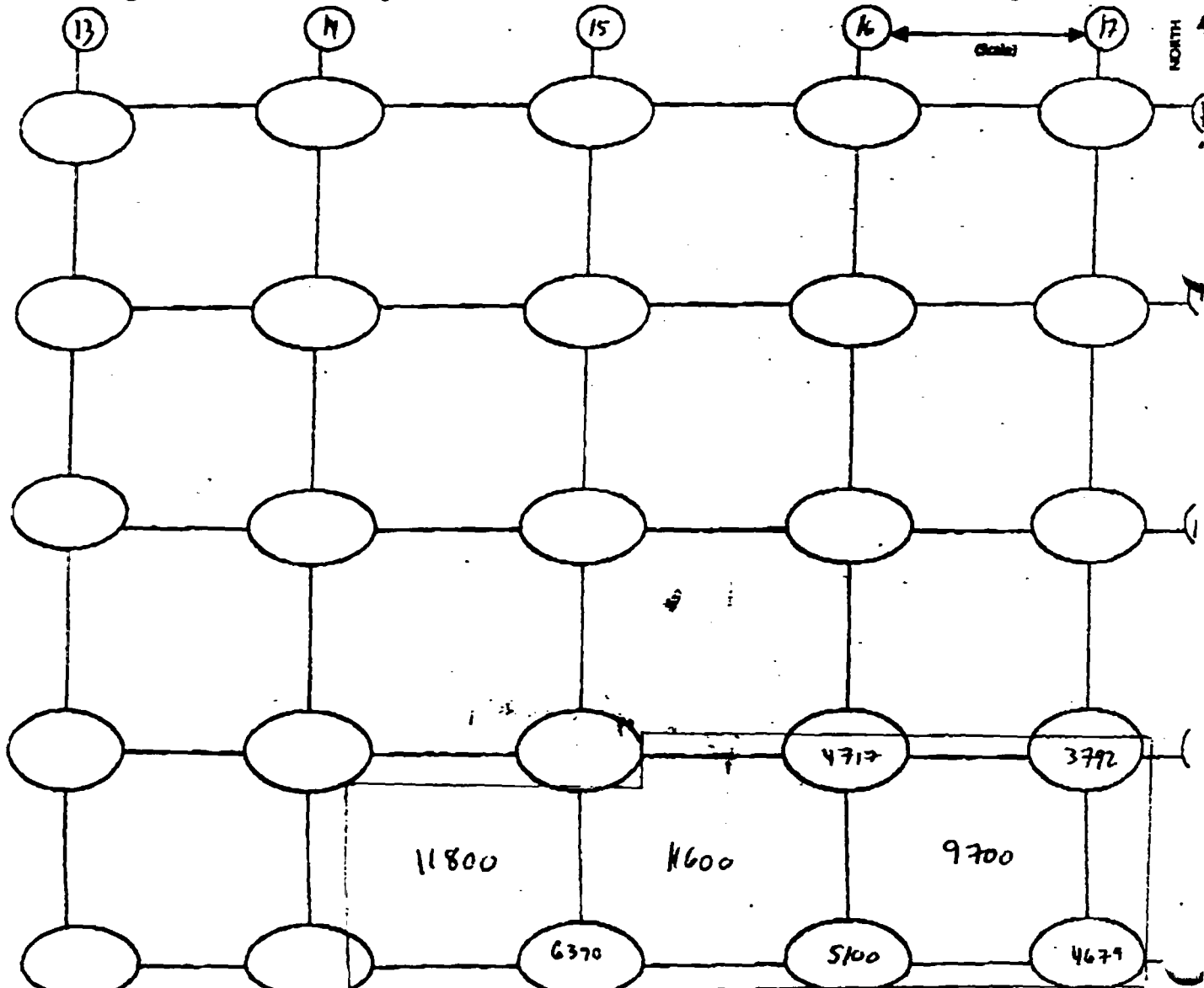
RADIATION SURVEY FORM

Project # 255BS-XI Project Name GMO Page 2 of 7

STS Consultants, Ltd.

Date 8/15 8/15 8/15Technician Toby YawInst. Model Ludlum 2221Serial No. 132891 PR163141Probe Type 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 82-142 unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone of other phase
 - - - - - LAUNDRY NE = Not excavated SL = Slope



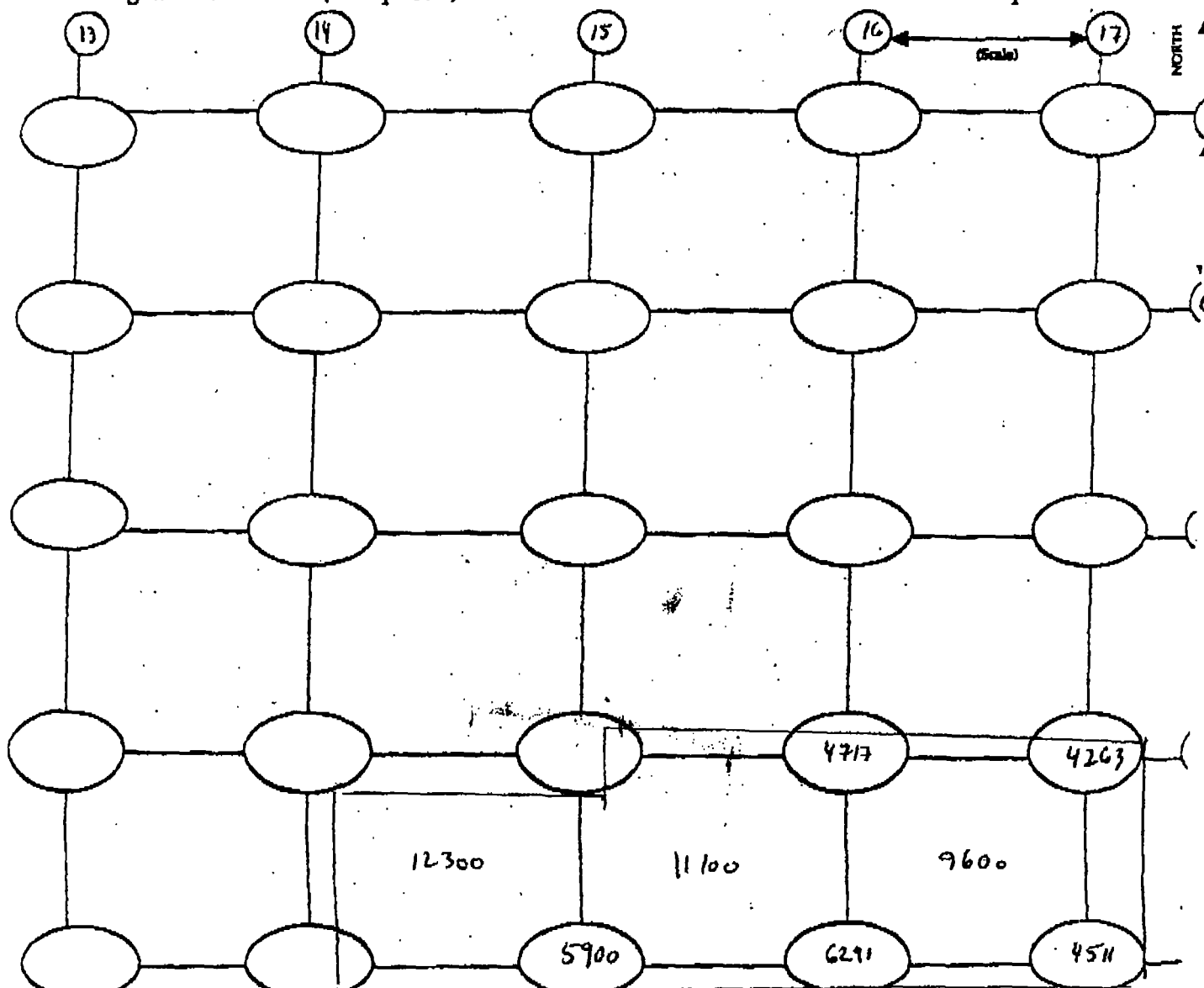
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMO Page 3 of 7

STS Consultants, Ltd.

Date 8/15 8/20 9/1Technician Toby ShumanInst. Model Ludlum 2221Serial No. 132844 PR160149Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3Background 8K-14K unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Phase
 LAUNDRY NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 2

STS Corporation, Ltd.

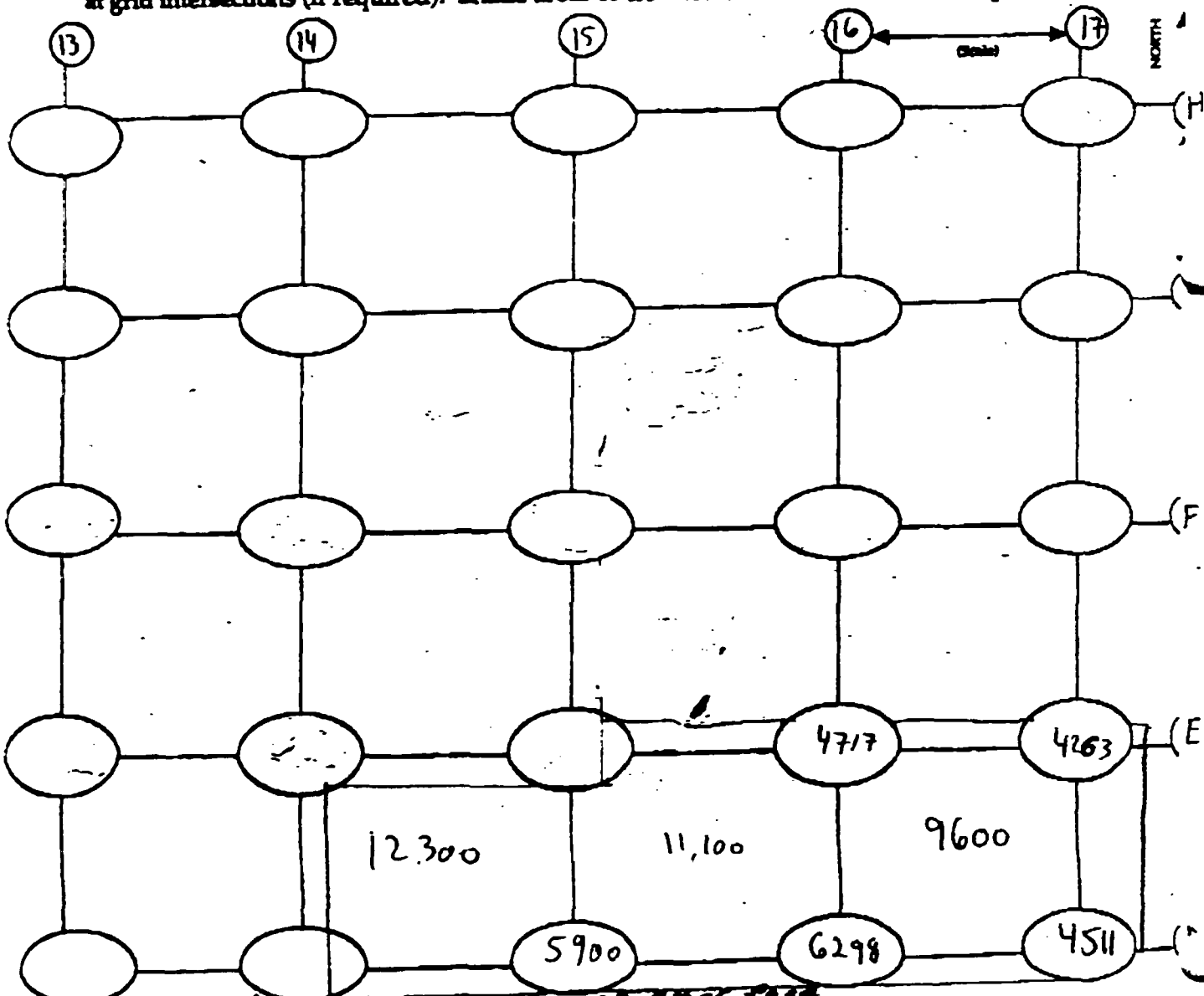
Date 8/15 8/15/14 8/21

E-0/16-17

E-0/14-17

Technician Toby ShewanSerial No. 152874 PR 168/48Inst. Model Ludlum 2221Lift Elevation -3'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 9K-14K unshielded cpmAction Level 20,909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone of other pass
 Exclusion zone boundary NE = Not Examined SL = Slope



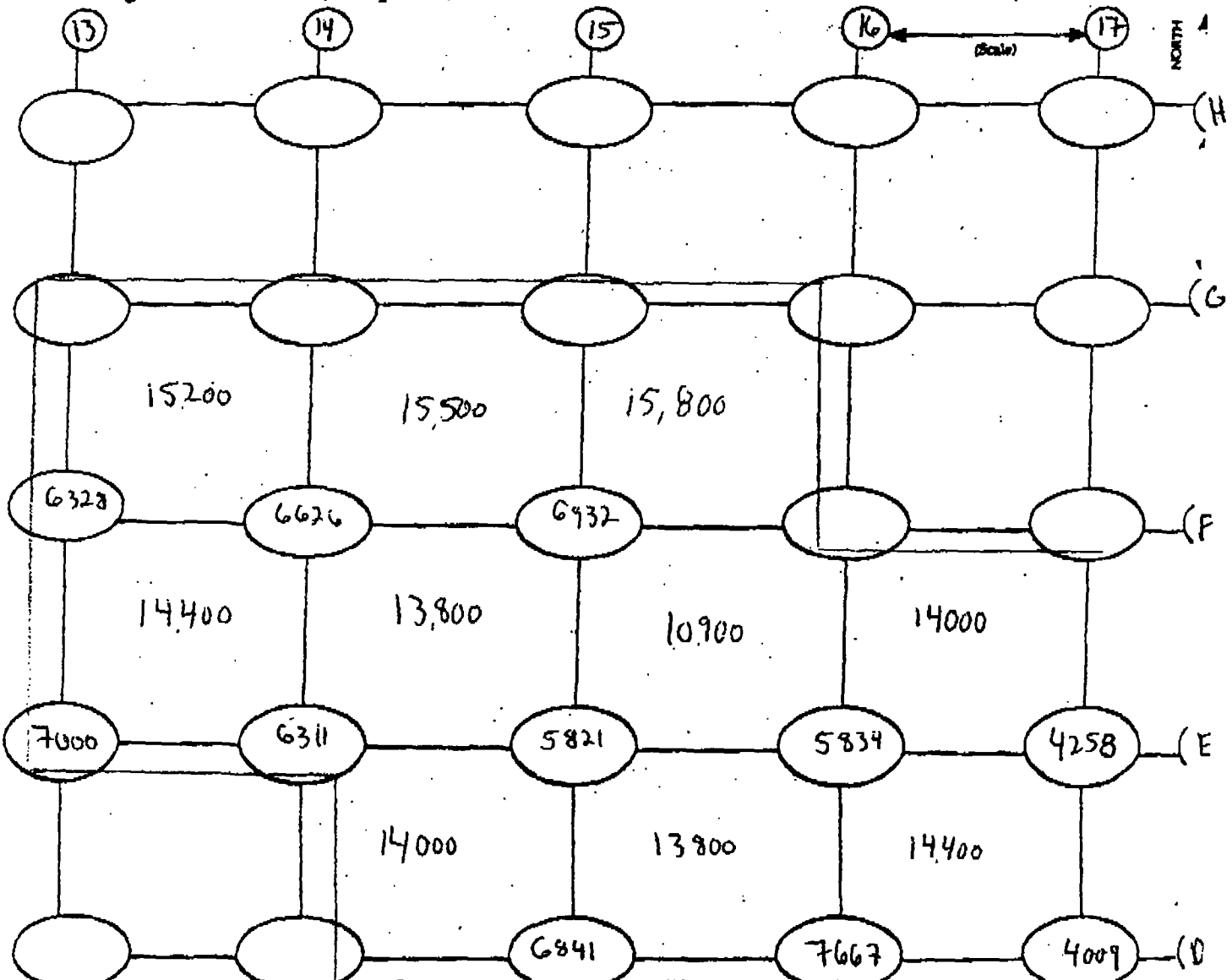
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 7

STS Consultants, Ltd.

Date 6F/13-16 8/15 F-E/15-14 8/20 C-D/14-17 8/21Technician Toby ShennInst. Model Ludlum 2221meter # 132844 Probe # PR 167149Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedLift Elevation -4.5'Background 8K-14K' unshielded cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Pass
 * = Exclusion zone boundary NE=Not excavated SL=Slope



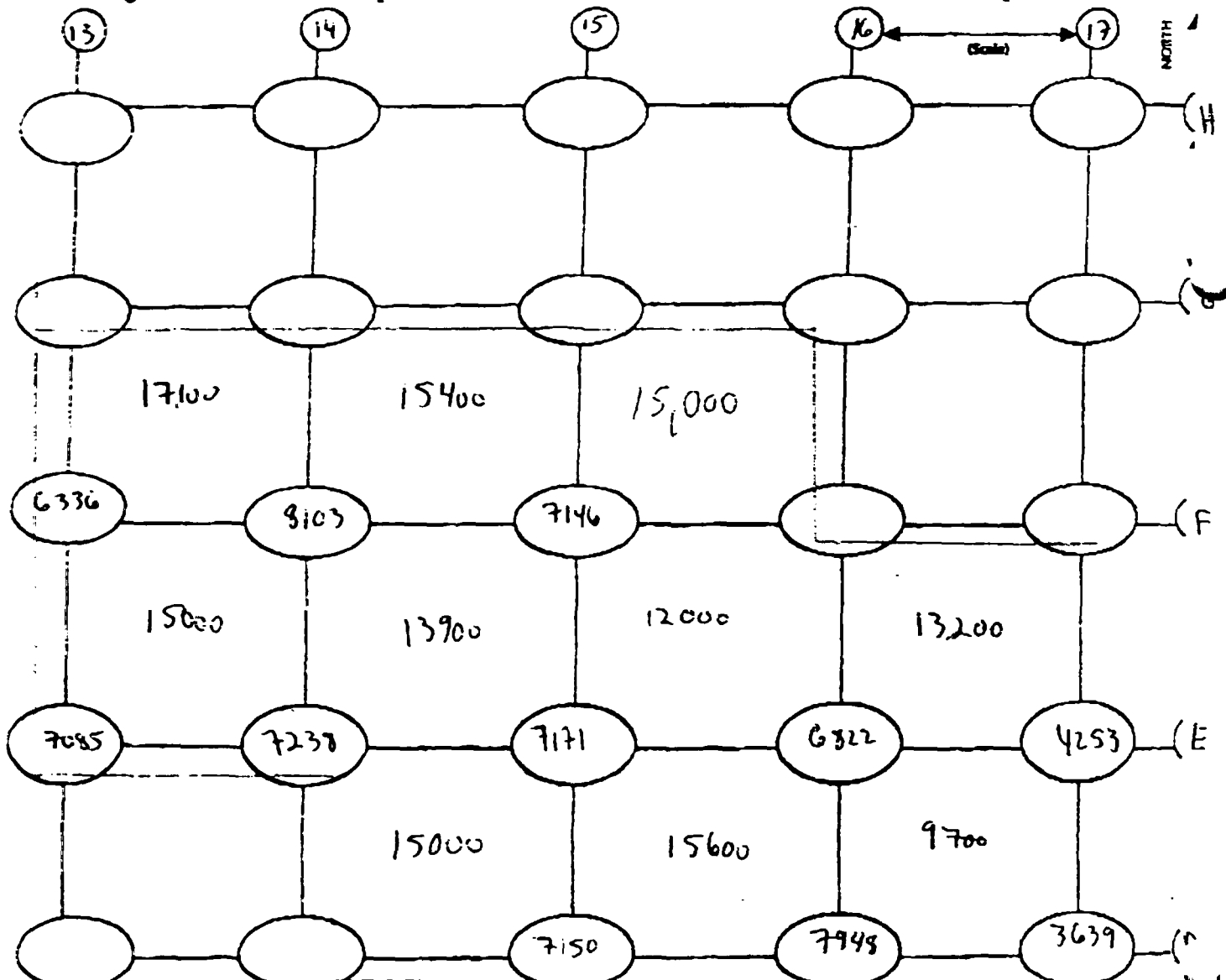
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 7

STS Consultants Ltd.

Date 6-F/13-02 6-E/13-02 C-D/16-02
08/15 09/10 09/21Technician Toby ShewanInst. Model Ludlum 2221Material Probe 3
Serial No. 132344 FR 165198Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background SA - 14K unshielded cpmAction Level 20,709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, OMER, Paga
 * - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

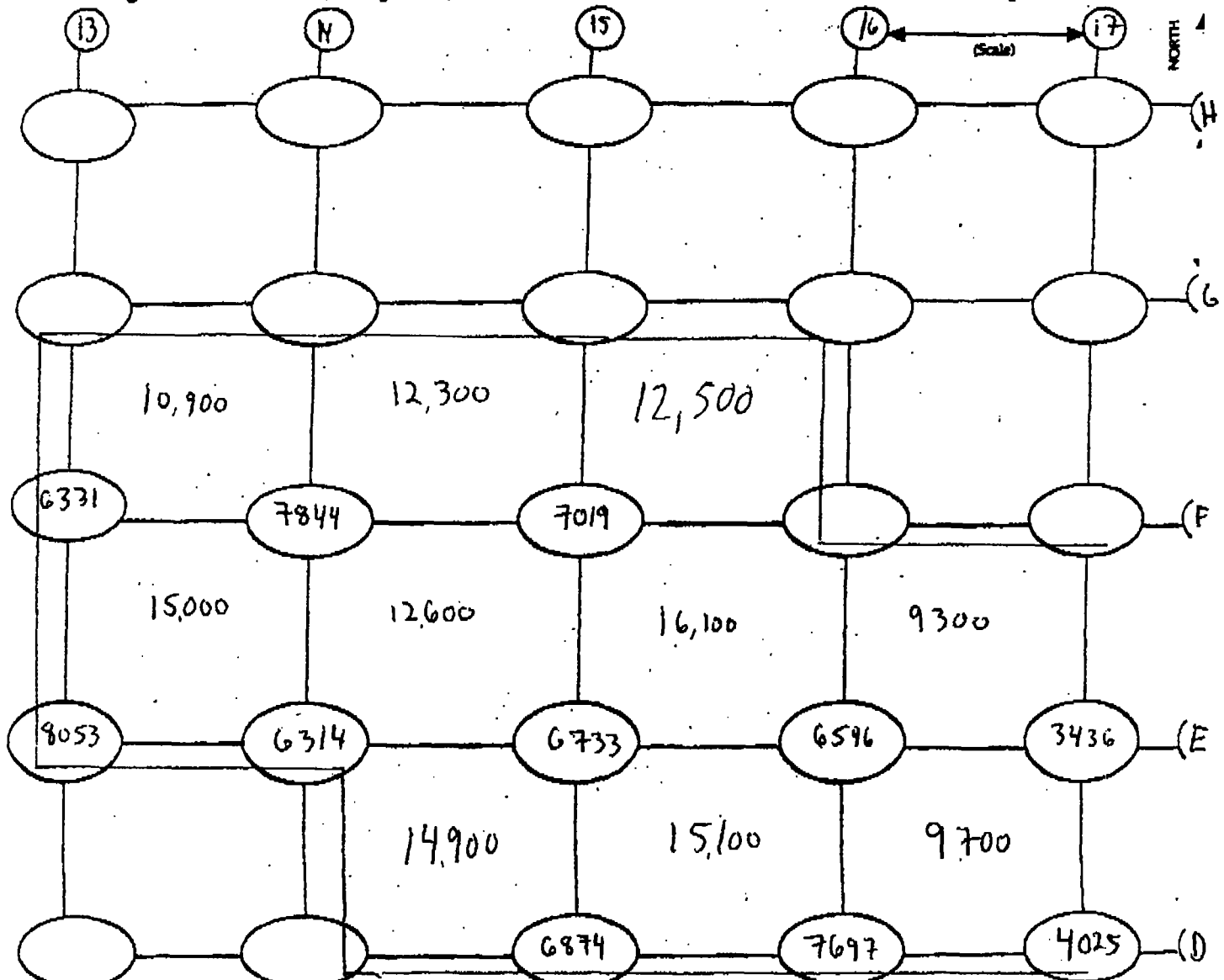
Project # 25585-XI Project Name GMO Page 6 of 7

STS Consultants, Ltd.

 6-8/13-15
 Date 08/15 08/20 08/21
Technician Toby ShawenInst. Model Ludlum 2221
 meter # 132844 / Probe # PR-168148
 Serial No.

 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -7.5Background 8K-14K unshielded cpmAction Level 20,909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Over Pass
 * = Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

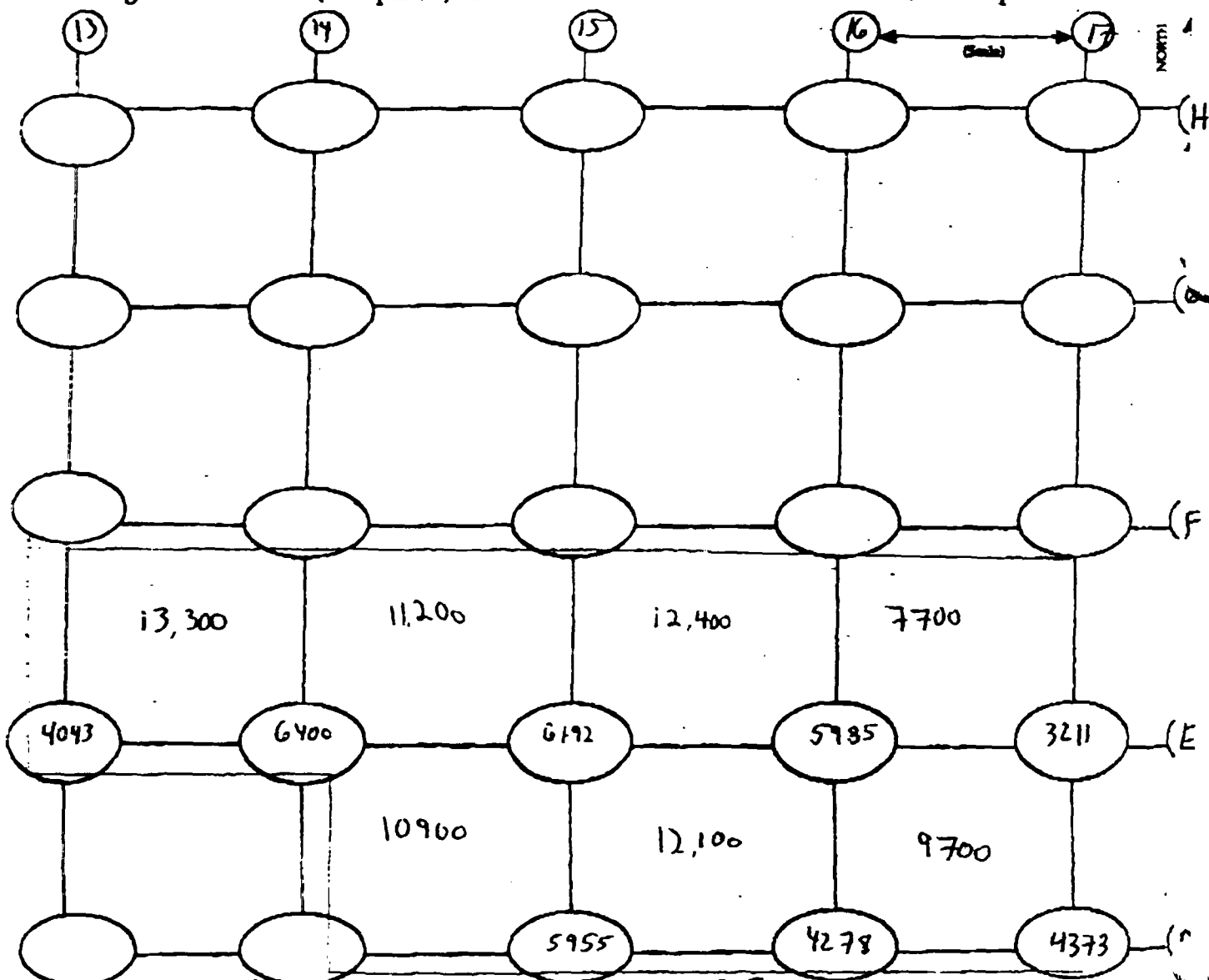
Project # 25585-XI Project Name GMO Page 2 of 2

STS Consultants, Ltd.

 Date 09/16 09/16 09/16
Technician Toby ShewanInst. Model Ludlum 2221
 Serial No. 132844 PR-168148

 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -9'Background Not Shielded cpmAction Level 20,900 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
 --- Exclusion zone boundary NE: Not excavated SL: Slope



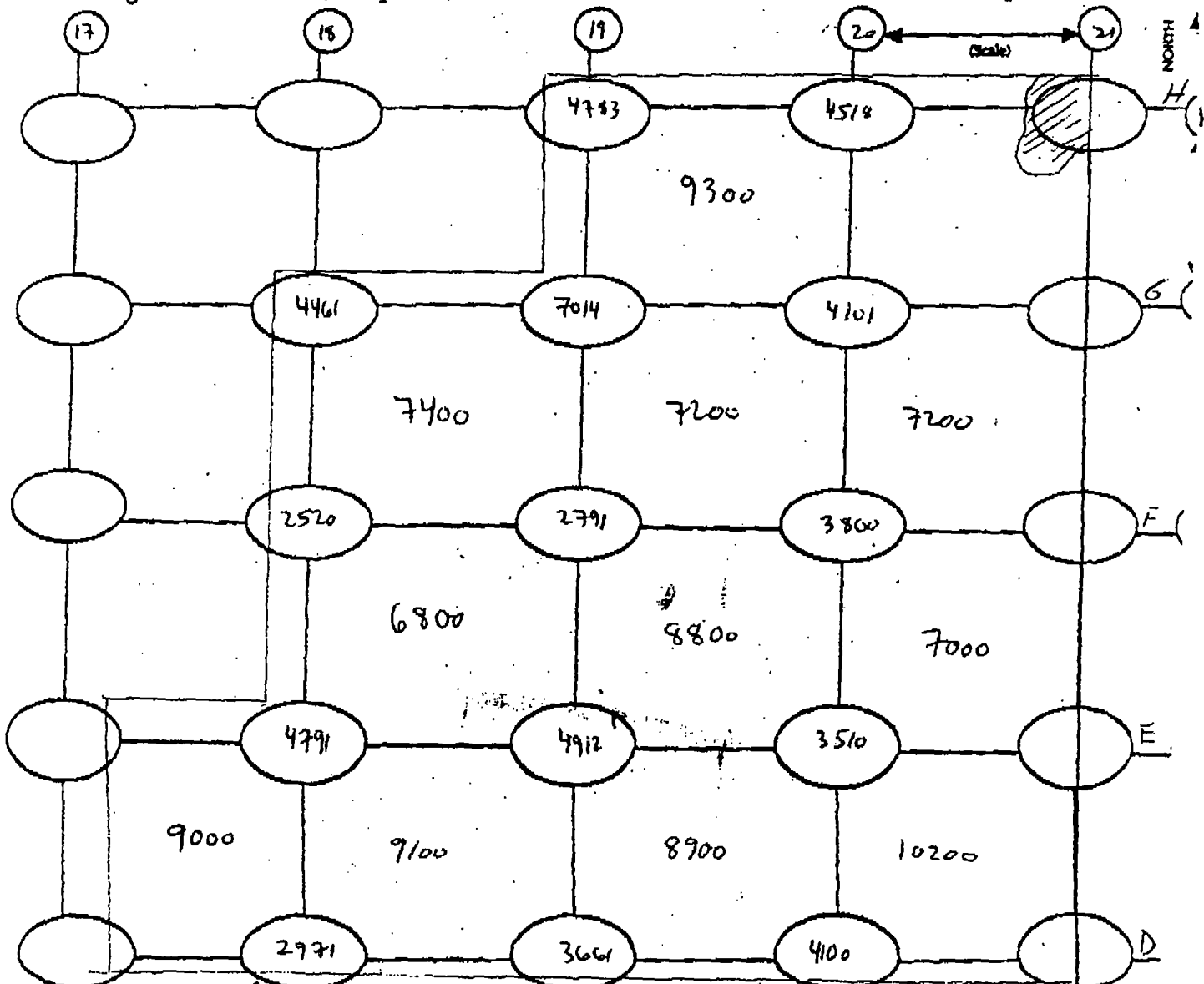
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/12/13 8/15 8/16 8/17 8/21Technician Toby ShewanInst. Model Ludlum 2221meter # PR168148
Serial No. 132844Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedLift Elevation SurfaceBackground 8k-14k unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP= Other Page
 Laundry NE= Not excavated SL= Slope



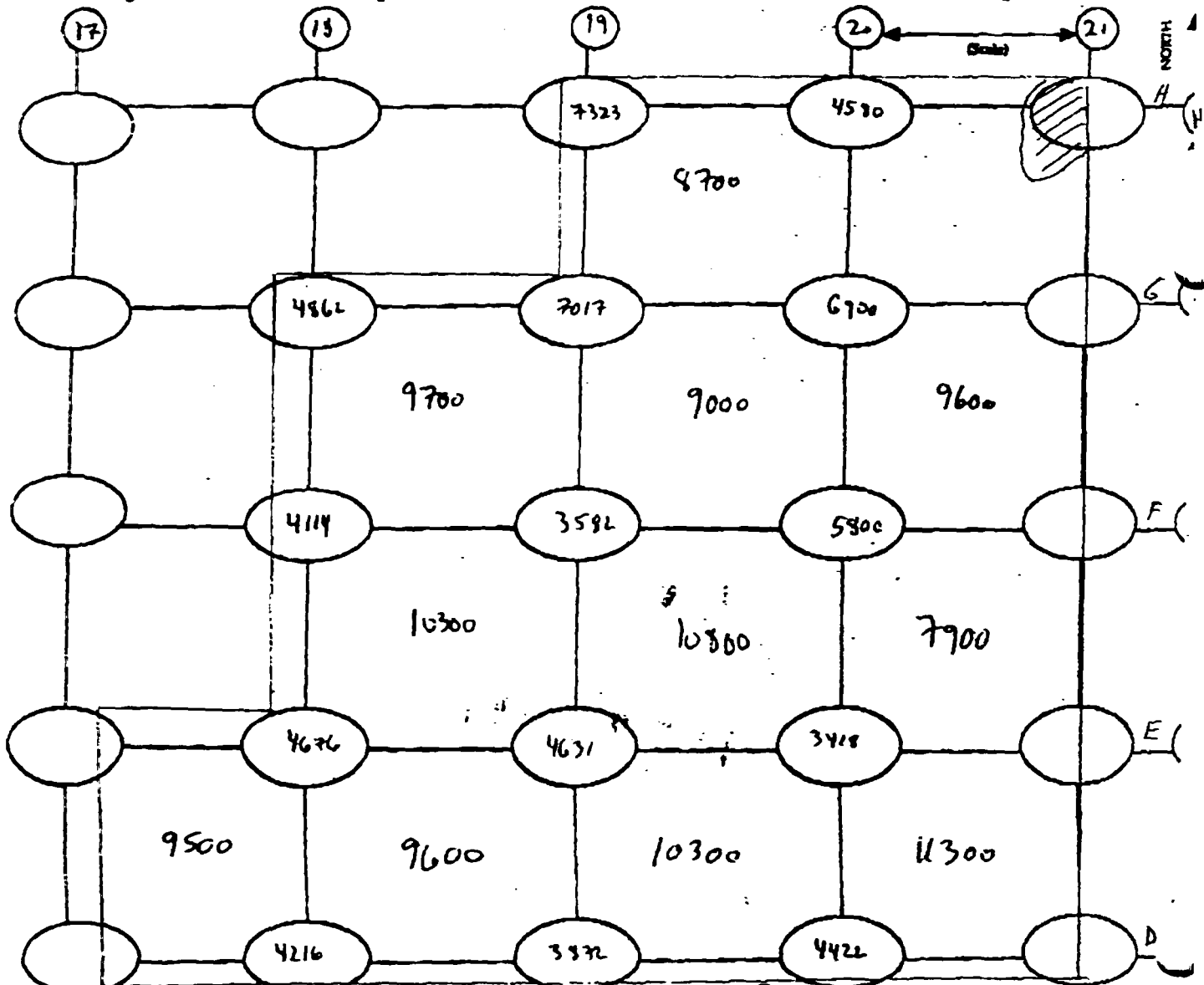
RADIATION SURVEY FORM

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STS Corporation, Ltd.

Date 6-11/14-21 8/12-13 8/15 8/16 8/17 8/18Technician Toby ShumanInst. Model Ludlum 2221Serial No. 132844 12168148Probe Type: 1"x1"NaI / 2"x2"NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 4h-4x unshielded cpm Action Level 2027 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other phase
Laundry NE = Not excavated SL = Slope



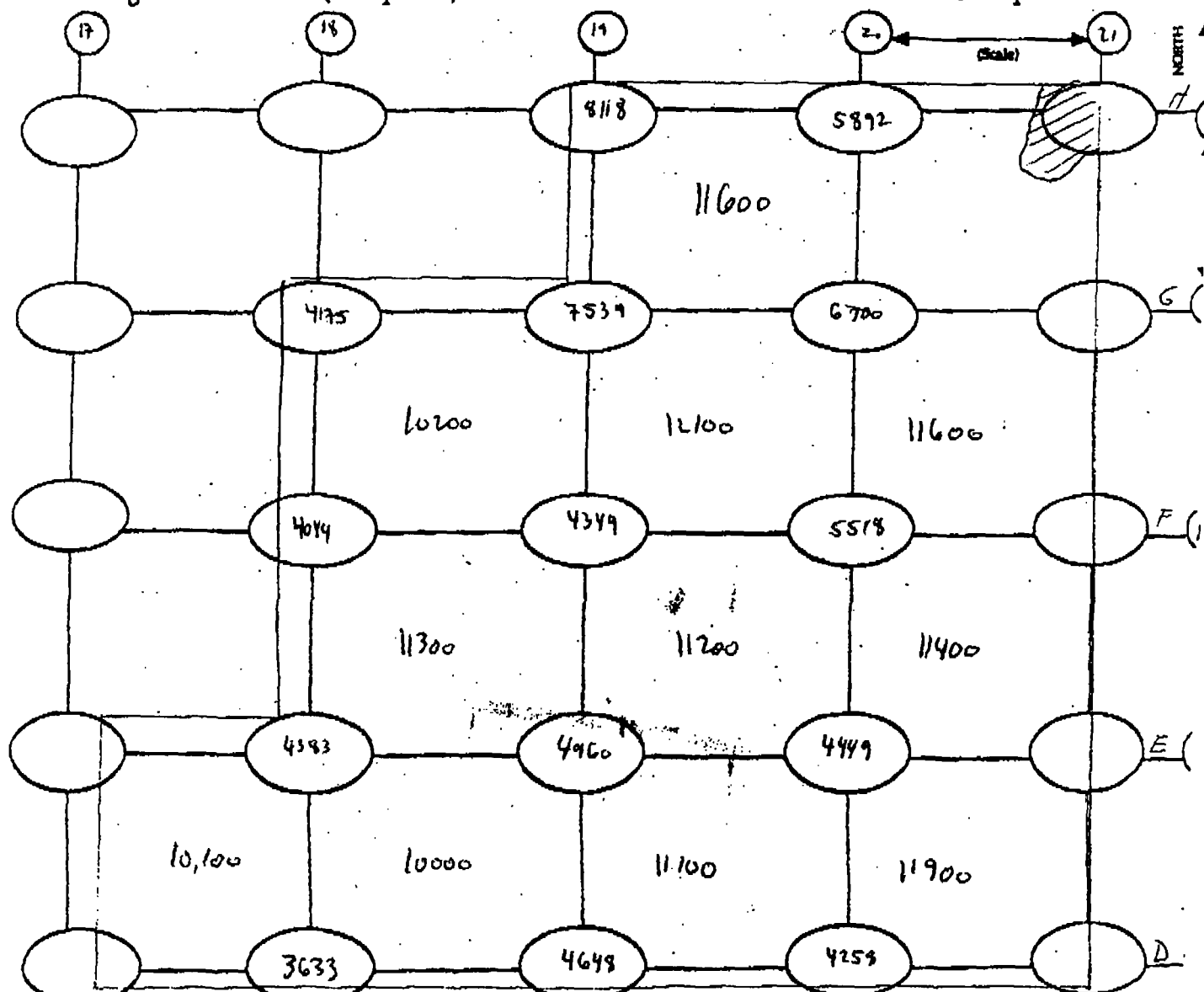
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 6-11/11-11 8/12-13 8/15 8-11/14-11 8/16 8-11/17-11 8/17 8-11/18-11 8/18Technician Tidy ShaverInst. Model Ludlum 2221Serial No. 132644 PK168149Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 8k-14k unshielded cpm. Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
 Laundry NE = Not excavated SL = Slope



RADIATION SURVEY FORM

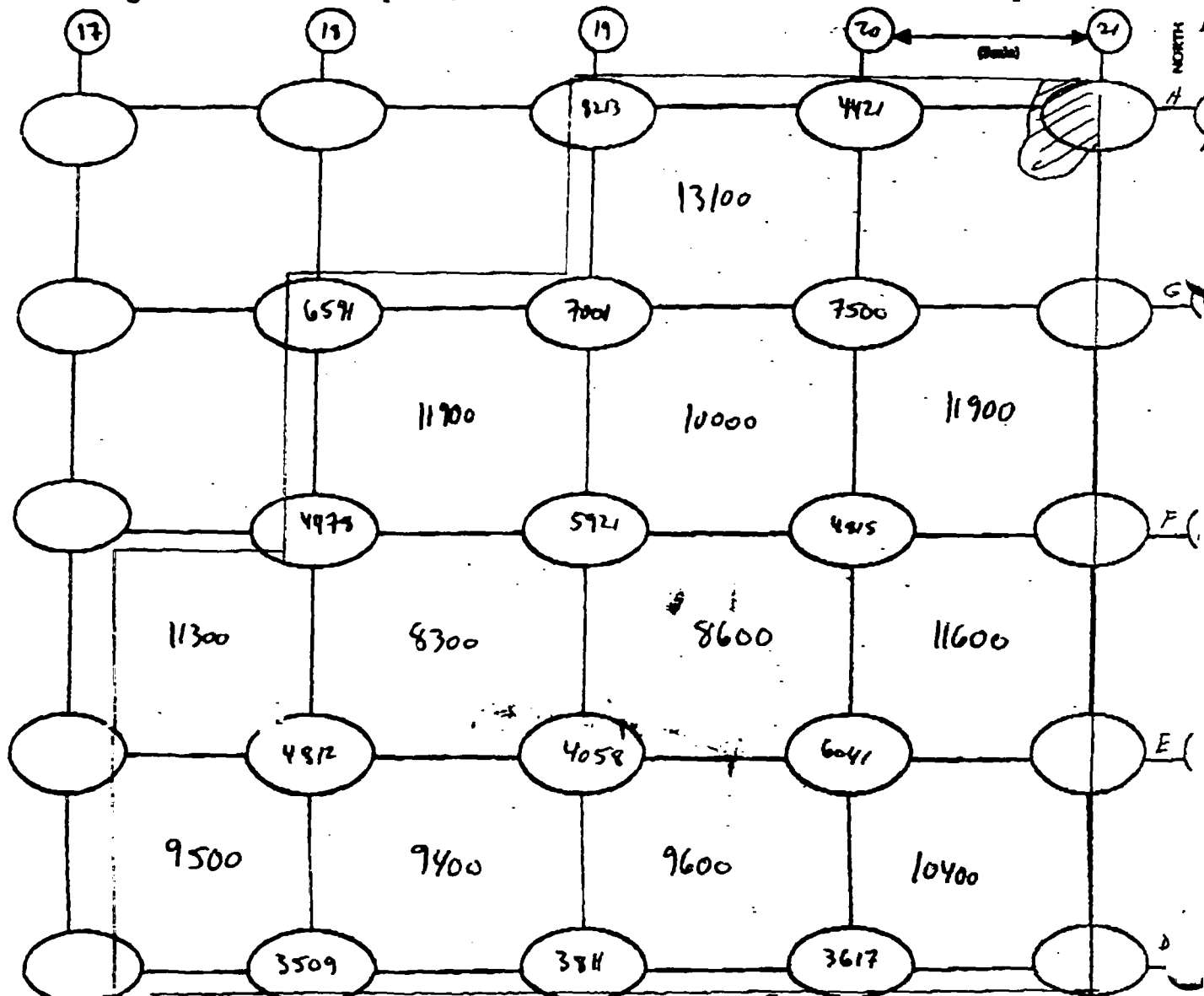
Project # 25585-XI Project Name GMO Page 4 of 7

STS Corporation, Ltd.

 Date 6-24-20 8/12-13 8/15 8/16 8/17 8/18
Technician Toby SignInst. Model Ludlum 2221
 Serial No. 132874 PR169148

 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -4.5'
 Background 9K-14K 0.2-1.1 cpm Action Level 2000 0.2-1.1 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of owner's property
 Boundary NE = Not excavated SL = Slope



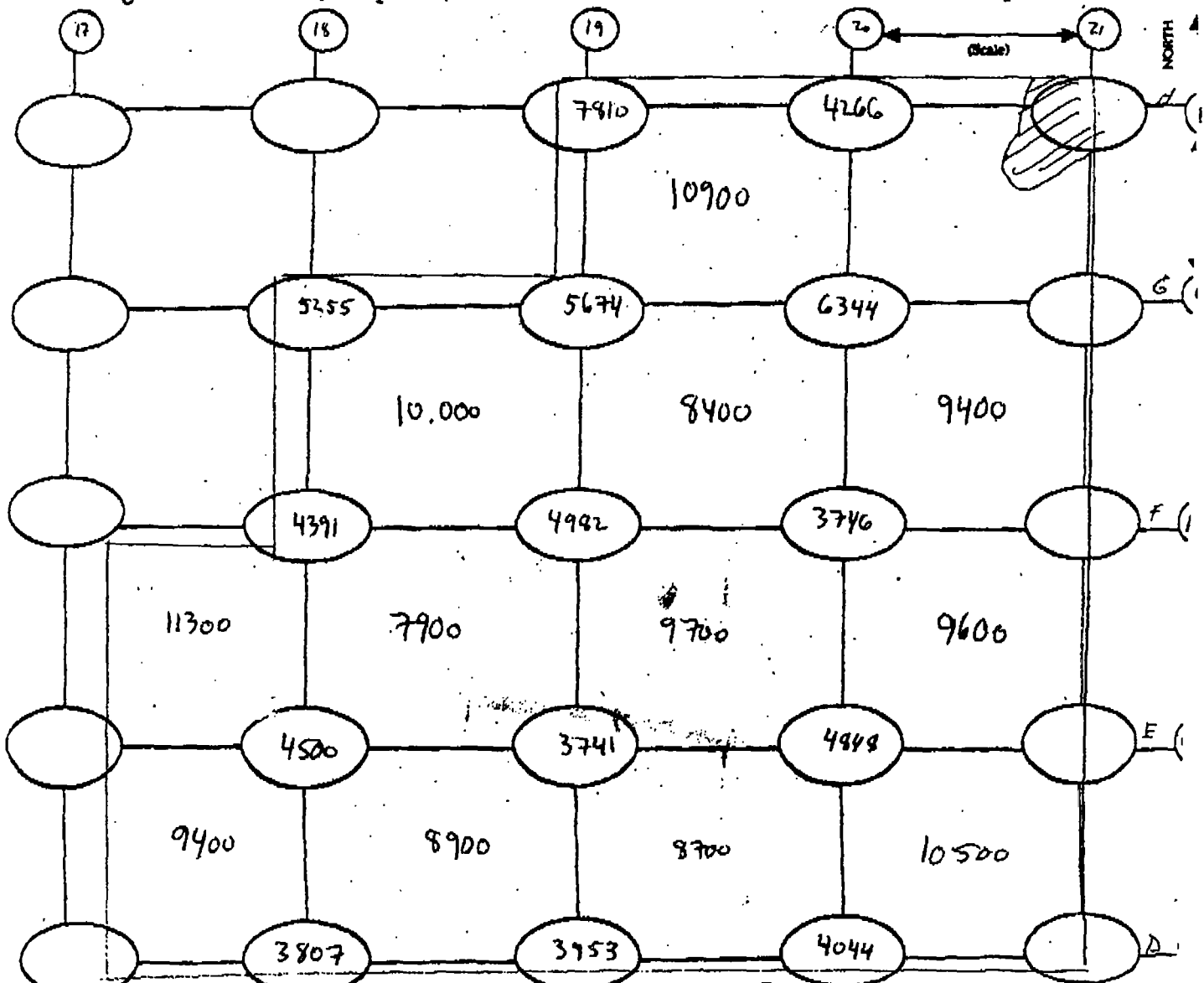
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/11/13 8/15 8/16 8/19 8/21Technician Tdy Shevan
meter # Probe 32
Serial No. 132844 PRK 8148Inst. Model Ludlum 2221Lift Elevation -6'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 9K-14K cpm Action Level 20709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Phase
 Laundry NE=Not excavated SL=Slope



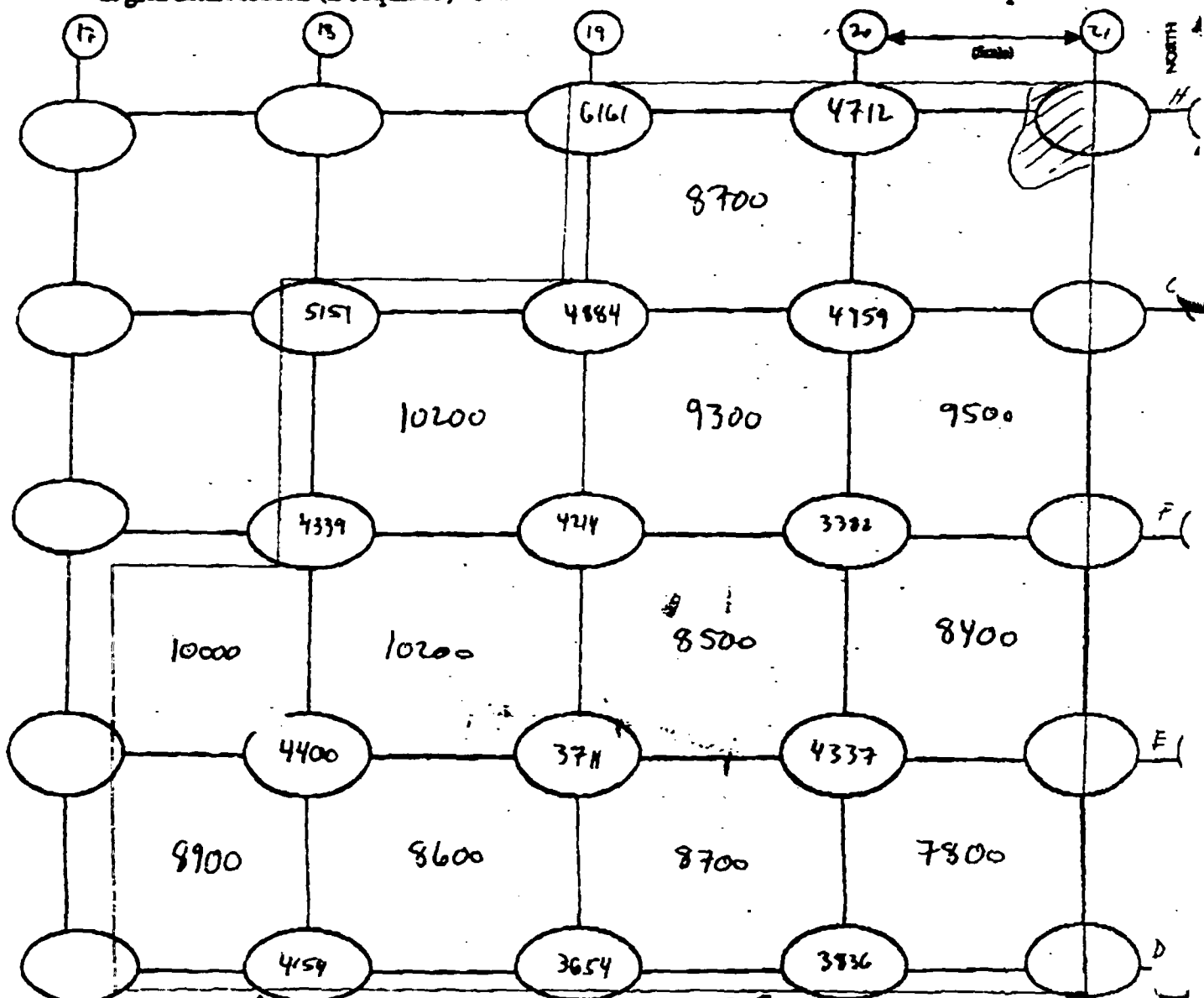
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/2/02 8/15 8/16 8/19 8/21Technician Ly ShauInst. Model Ludlum 2221Serial No. 132974 PR 168149Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 92-11K cpm Action Level 20709 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP. Other Pass
 Laundry NE = Not excavated SL = Slope



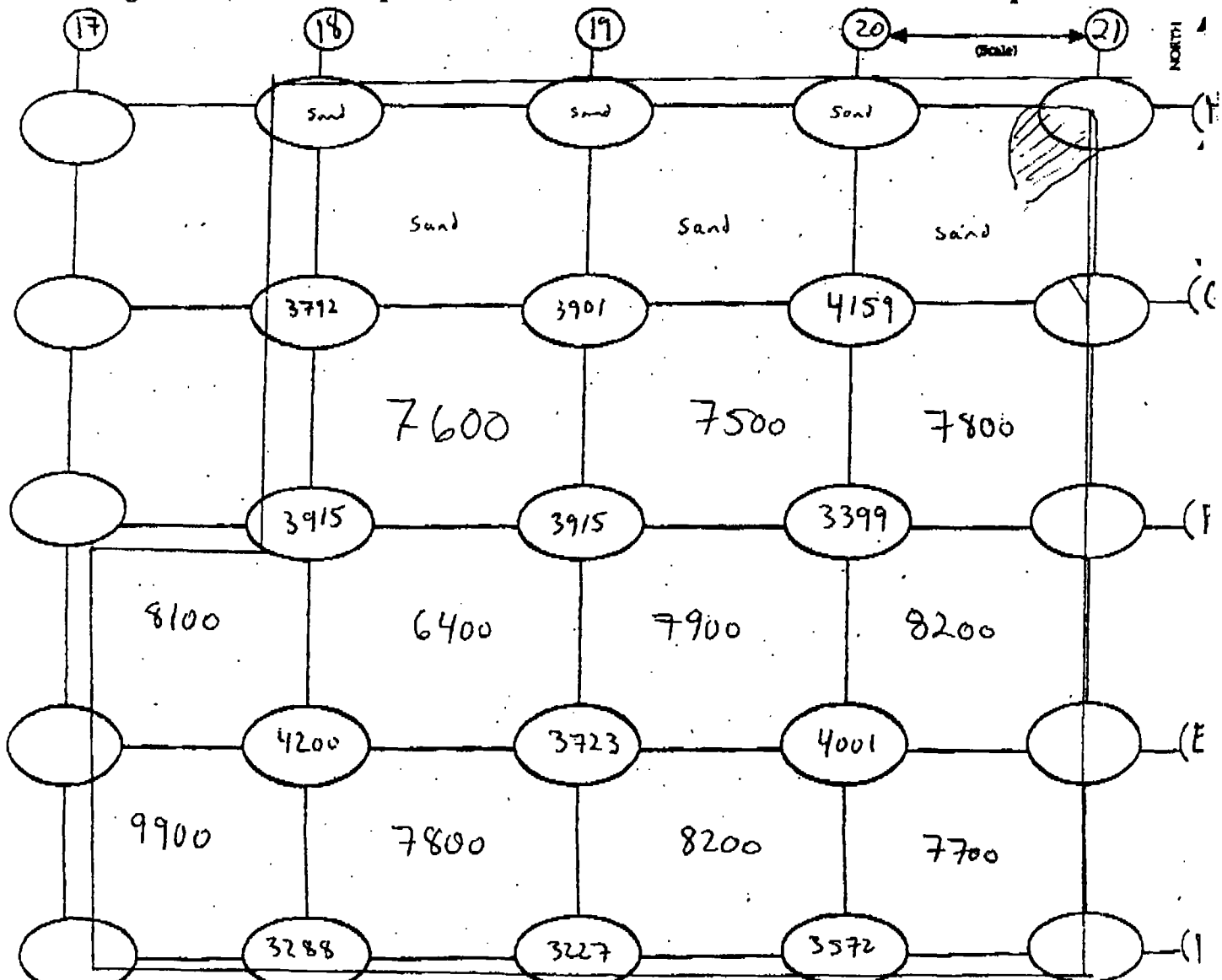
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/12/13 8/15 8/16 8/17 8/18Technician Toby ShawanInst. Model Ludlum 2221Serial No. 132844 PR 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -9'Background 8K-14K unshielded cpm Action Level 20,909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 - Exclusion zone boundary NE=Not excavated SL=Slope



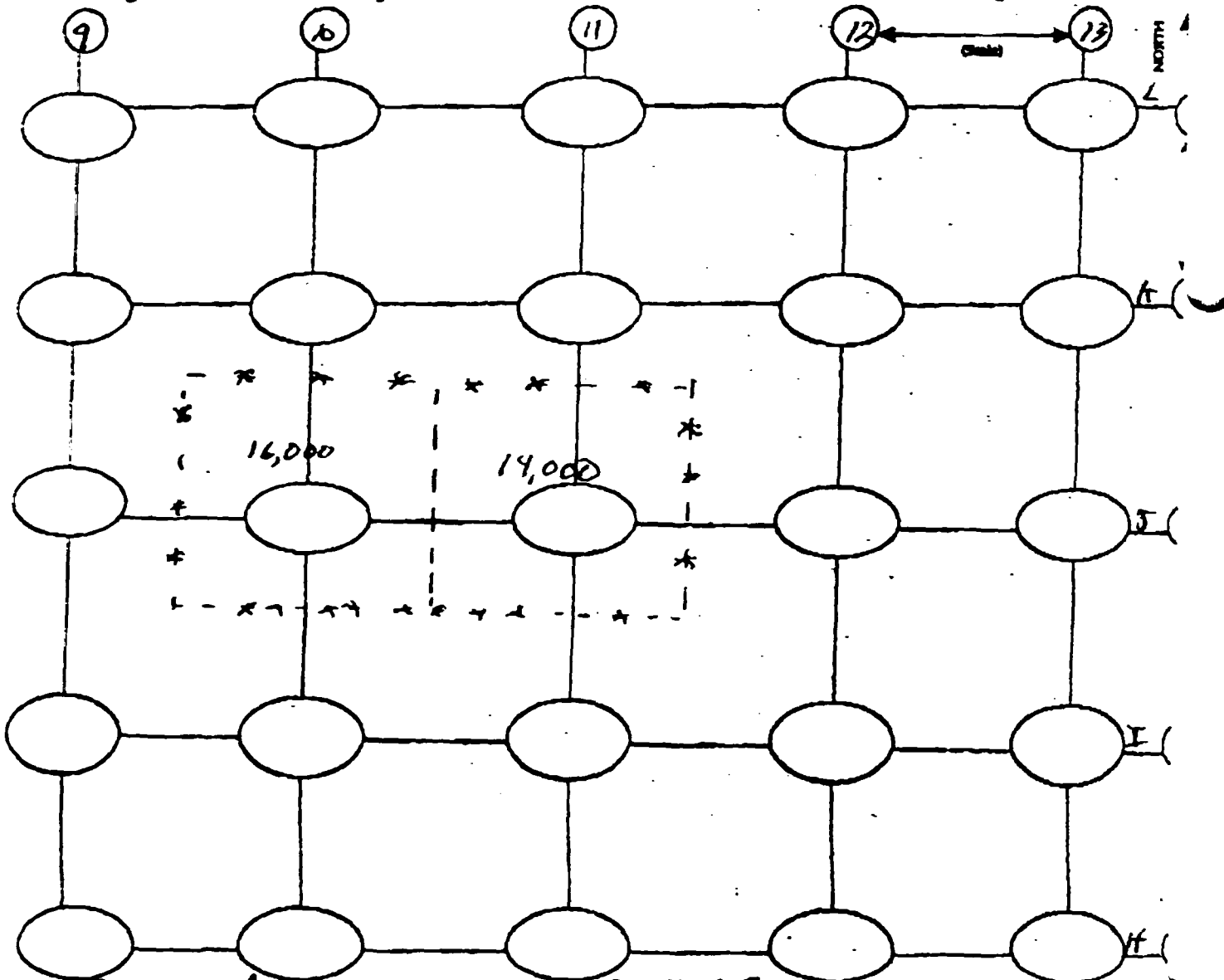
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8-26-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation Pic EPABackground 4.1-10k cpmAction Level 20,000 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone of other page
Exclusion zone boundary NE = Not excluded SL = Slope



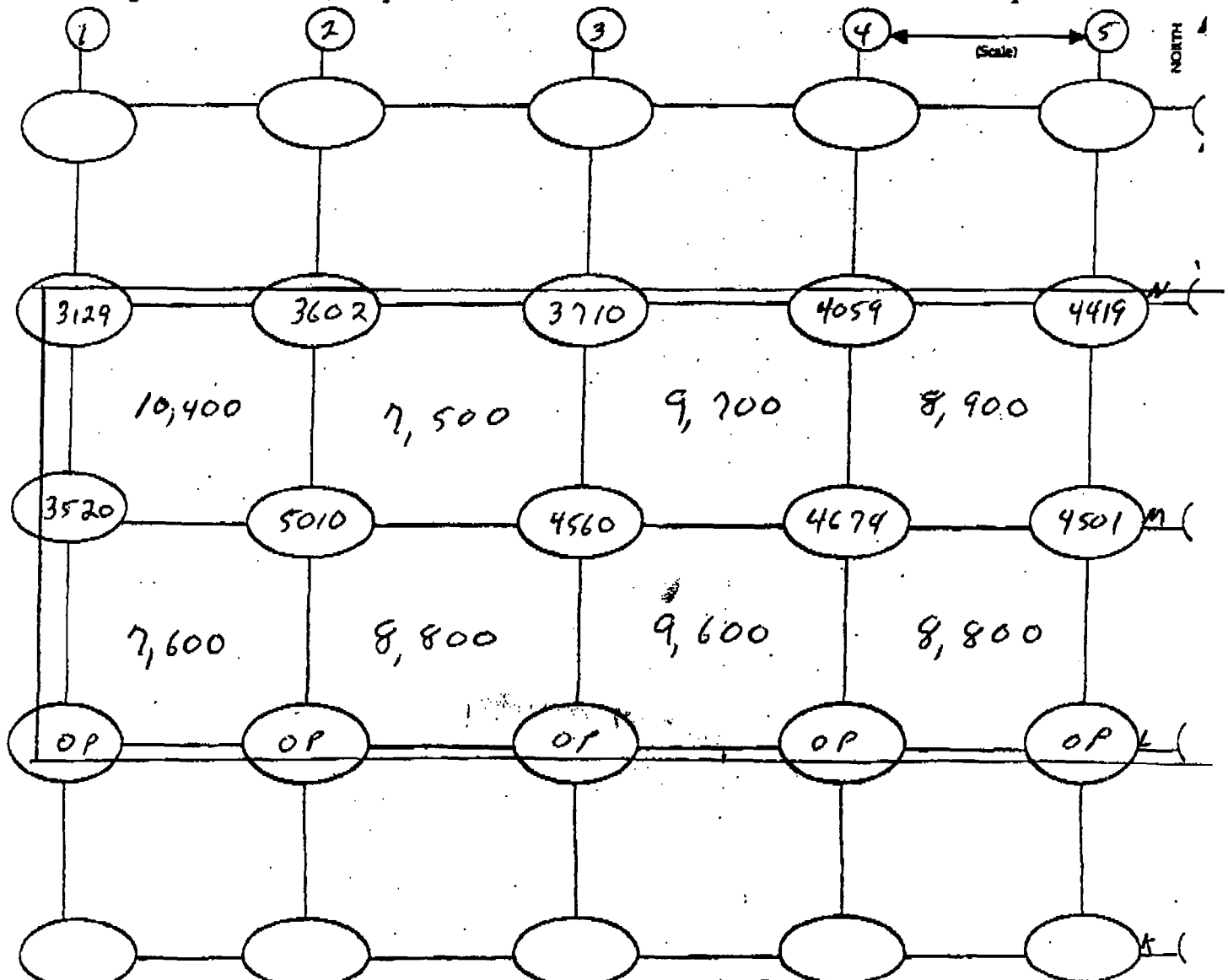
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 9-3-02Technician L D SmithInst. Model Ludlum 2221Serial No. 12C496 / 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded () Not Shielded (X)Lift Elevation SurfaceBackground 4A-8A cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



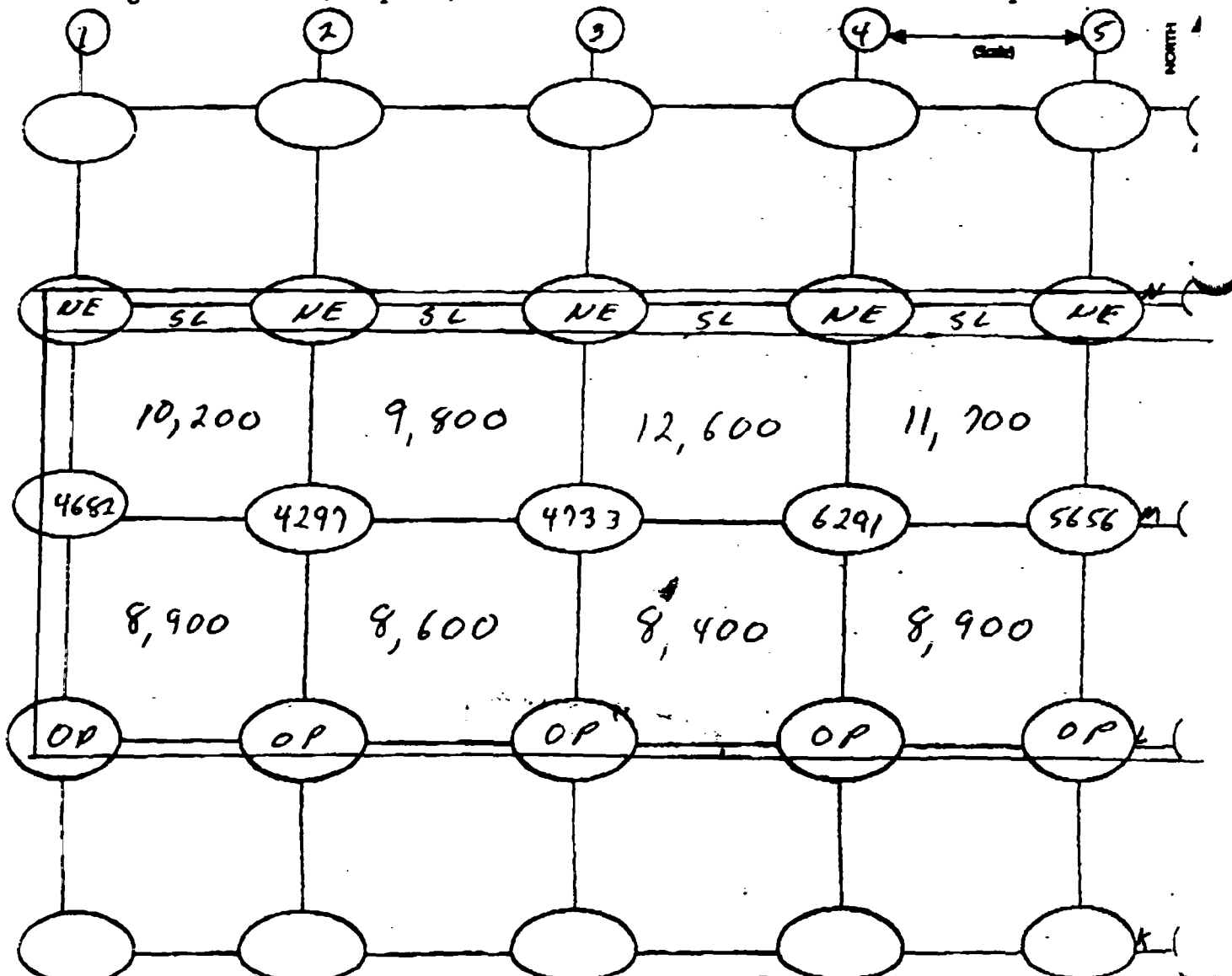
RADIATION SURVEY FORM

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STS Consulting, Ltd.

Date 9-3-02Technician L D SmithInst. Model Ludlum 2221meter # 12C496 Probe # 118143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not ShieldedLift Elevation -1.5'Background 4A-8A cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
 * = Exclusion Zone boundary NE = Not excavated SL = Slope



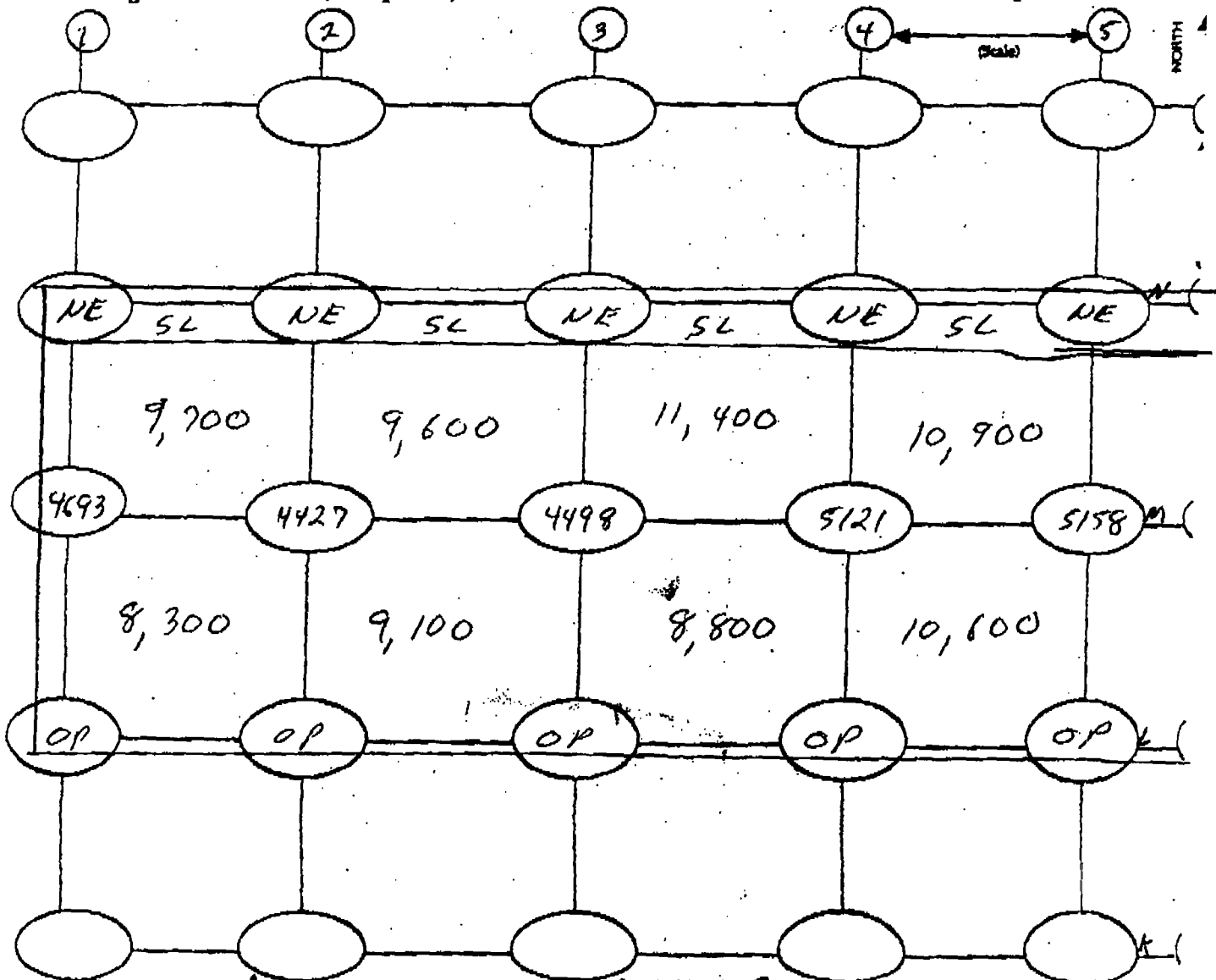
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 9-3-02Technician L D SmithInst. Model Ludlum 2221meter # 12C496 Probe # 168143Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not ShieldedLift Elevation -3'Background 41-84 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 * = Exclusion Zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

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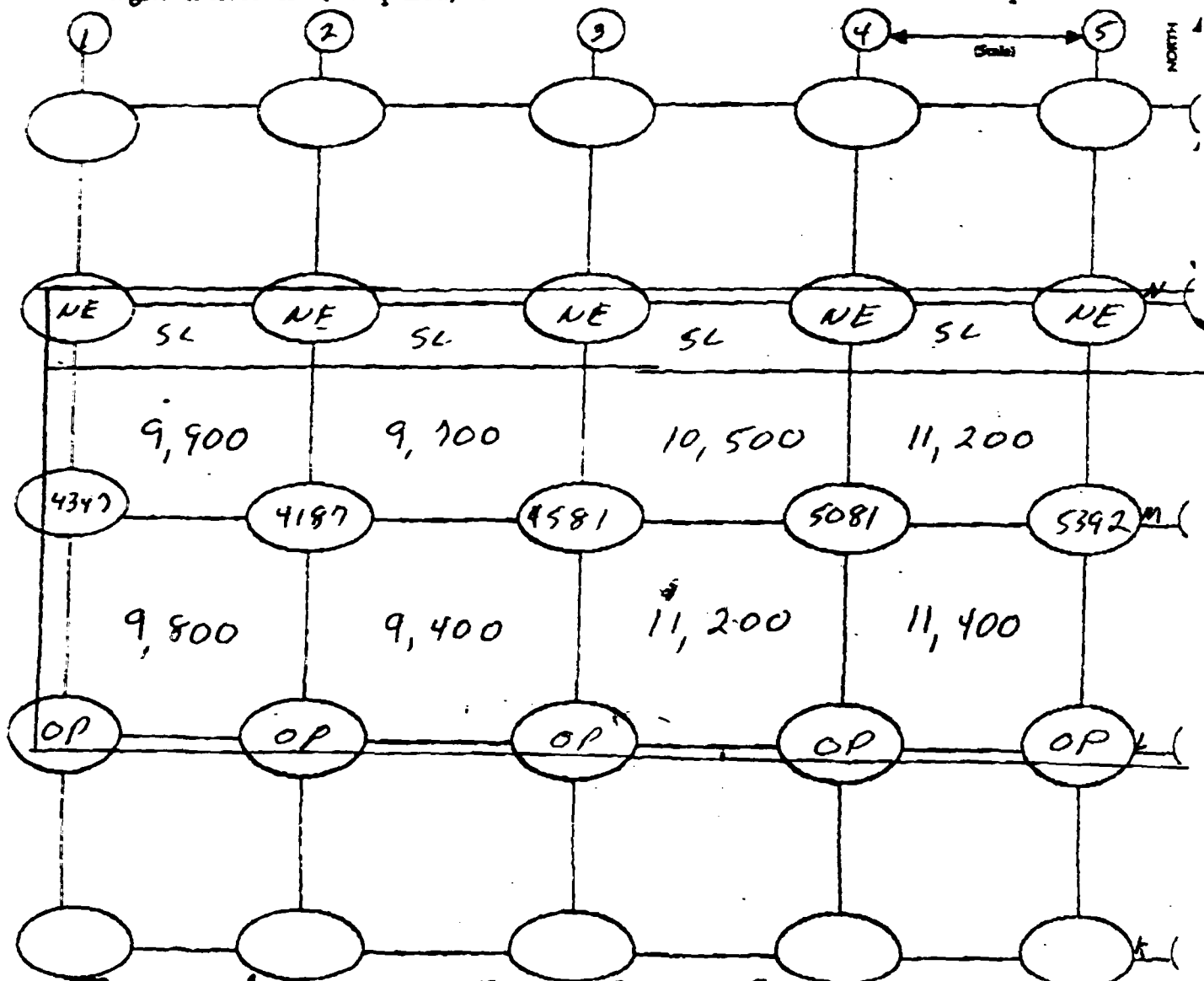
STS Corporation, Ltd.

Date 9-3-02Technician L D SmithInst. Model Ludlum 2221

meter #	Probe #
125496	168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded () Not Shielded ()Lift Elevation -4.5'Background 4A-84 cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 * = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

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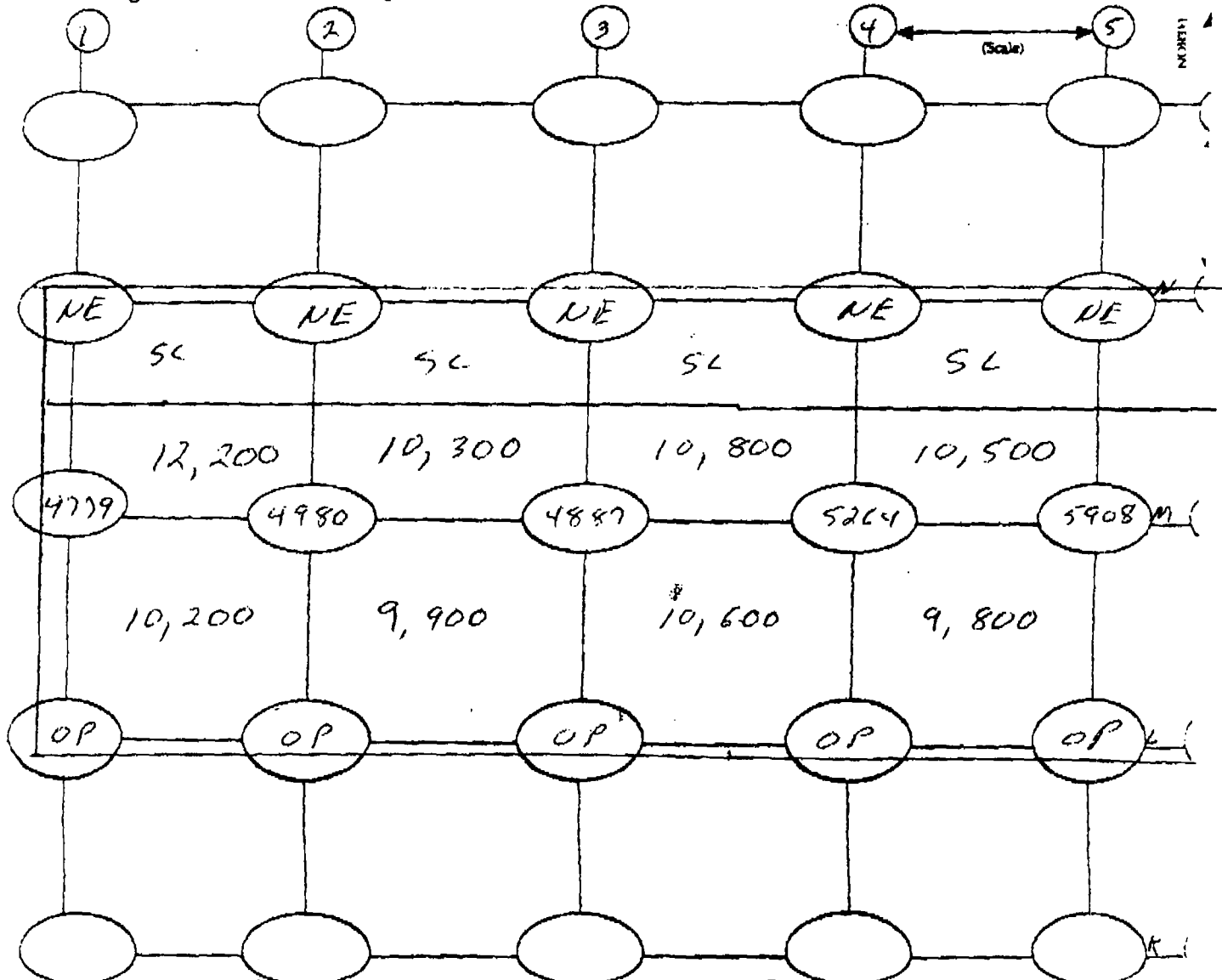
STS Consultants, Ltd.

Date 9-3-02Technician I D SmithInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>120496</u>	<u>168143</u>

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not ShieldedLift Elevation -6'Background 4 ft - 8 ft cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 * - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

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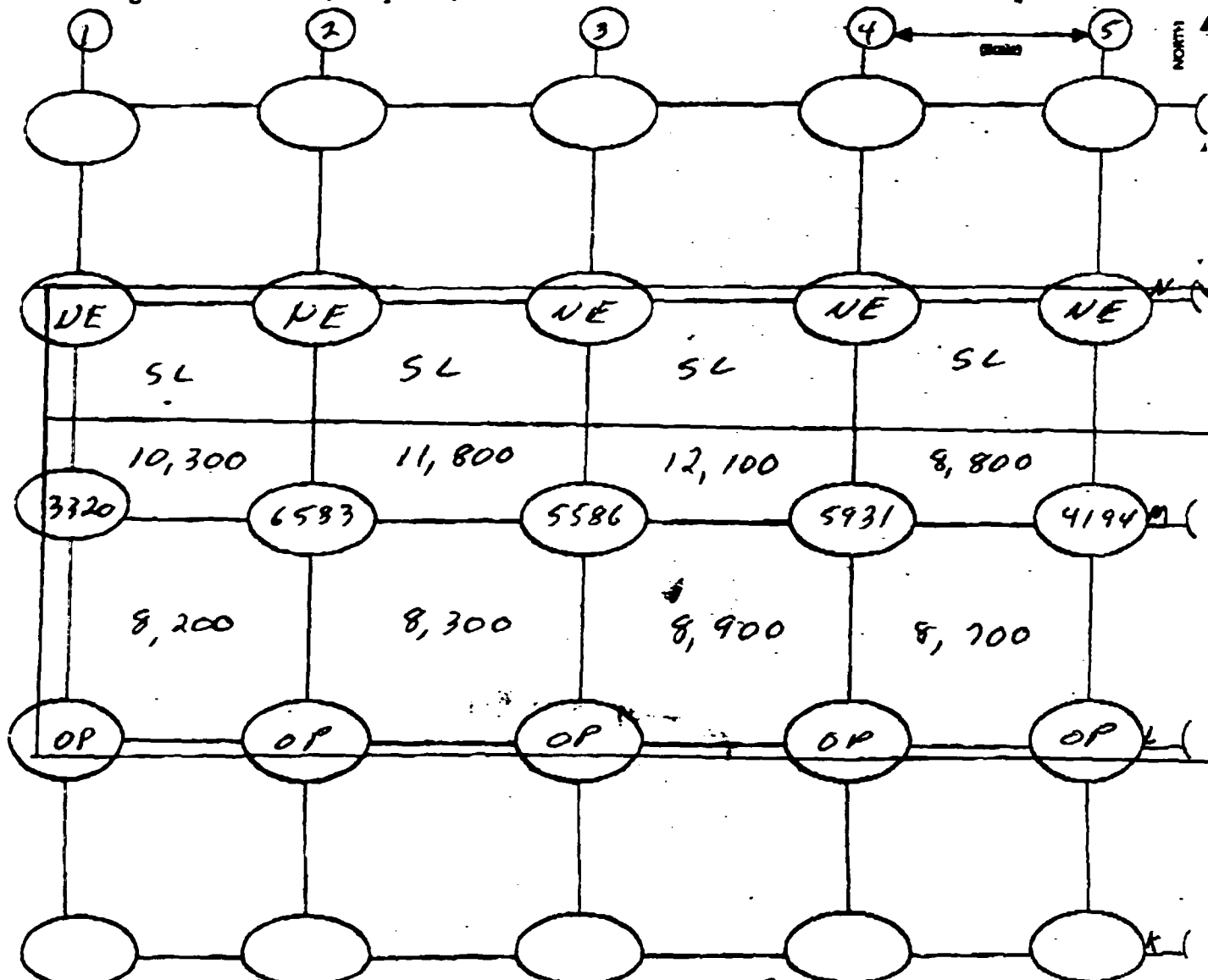
STS Consultants, Ltd.

Date 9-3-02Technician L D SmithInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>126496</u>	<u>168143</u>

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 4A-8A cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Over Pass
☒ Exclusion Zone boundary NE = Not excavated SL = Slope

✓GAH



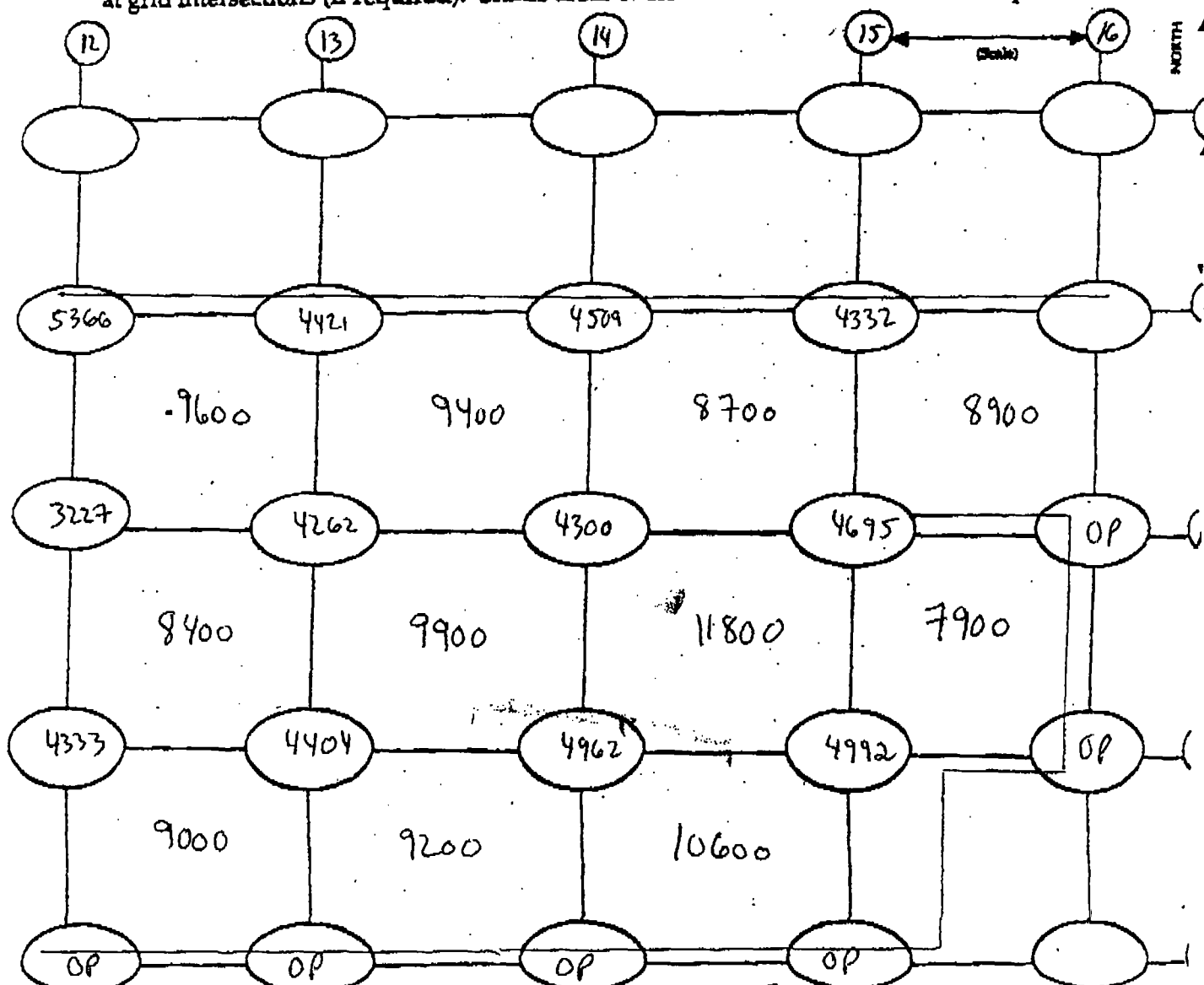
RADIATION SURVEY FORM

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STS Consultants, Ltd.

Date 8/27 9/3 9/4Technician Toby ShewanInst. Model Ludlum 2221meter # Probe #
Serial No. 132844 PR167148Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not ShieldedLift Elevation SurfBackground 8K-12K cpm Action Level 20909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 2 of 7

STS Consultants, Ltd.

 T-J/11-18
 K-J/12-14

K-L/11-13

K-J/11-16

K-L/11-16

Date

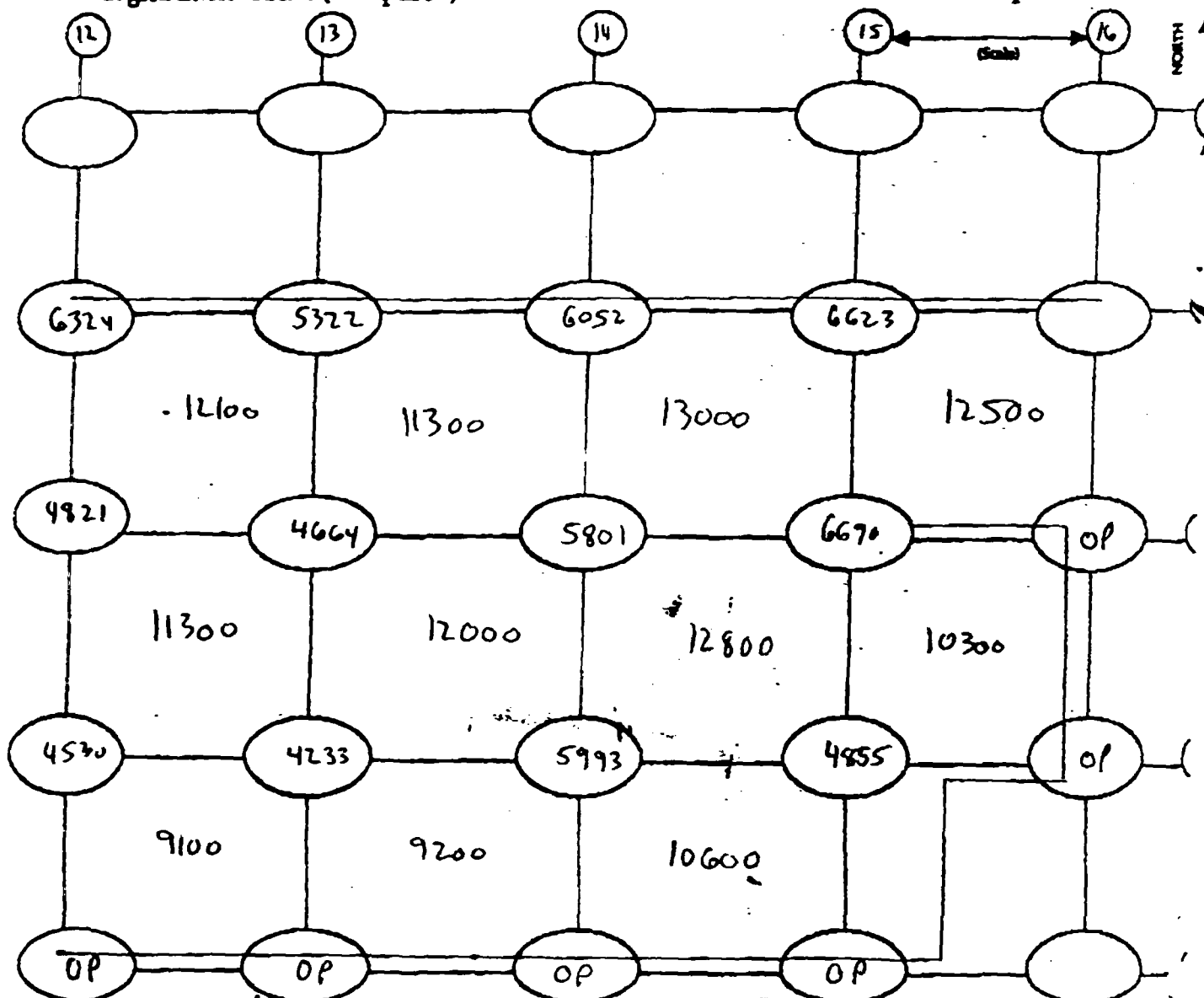
8/279h9hTechnician Toby Slaven

meter #

Probe #

Inst. Model Ludlum 2221Serial No. 132844PR168148
 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -1.5'Background 8k - 12k unshielded cpmAction Level 20709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 NE=Not excavated SL=Slope



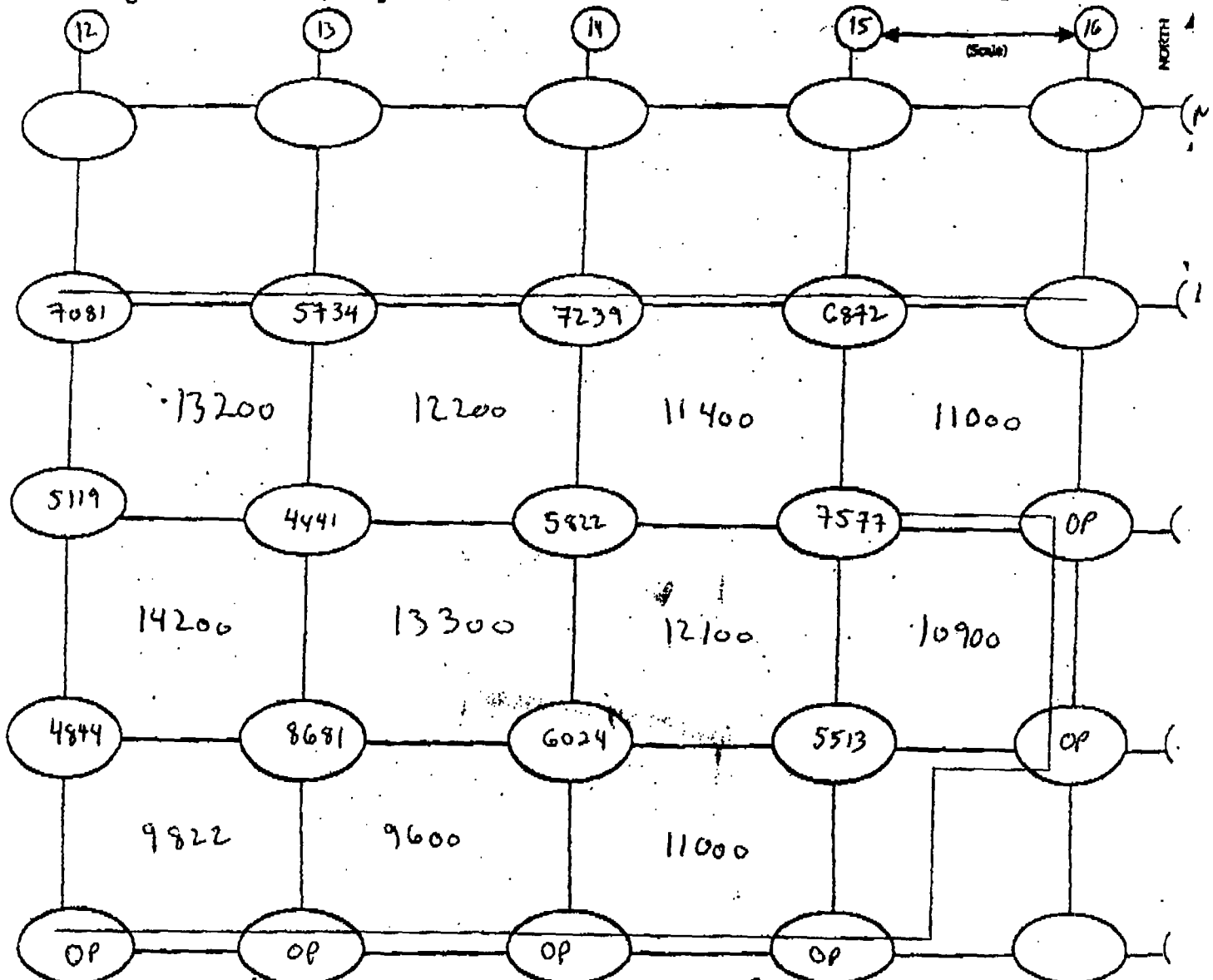
RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 3 of 7

STS Consultants, Ltd.

 Date 8/22 9/3 9/4
Technician Toby ShumanInst. Model Ludlum 2221Serial No. 132844 PK168148
 Probe Type: 1"x1"NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation -3'
 Background 8K-12K unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.


 Excavated as Exclusion Zone OP=Other Page
 NE=Not excavated SL=Slope

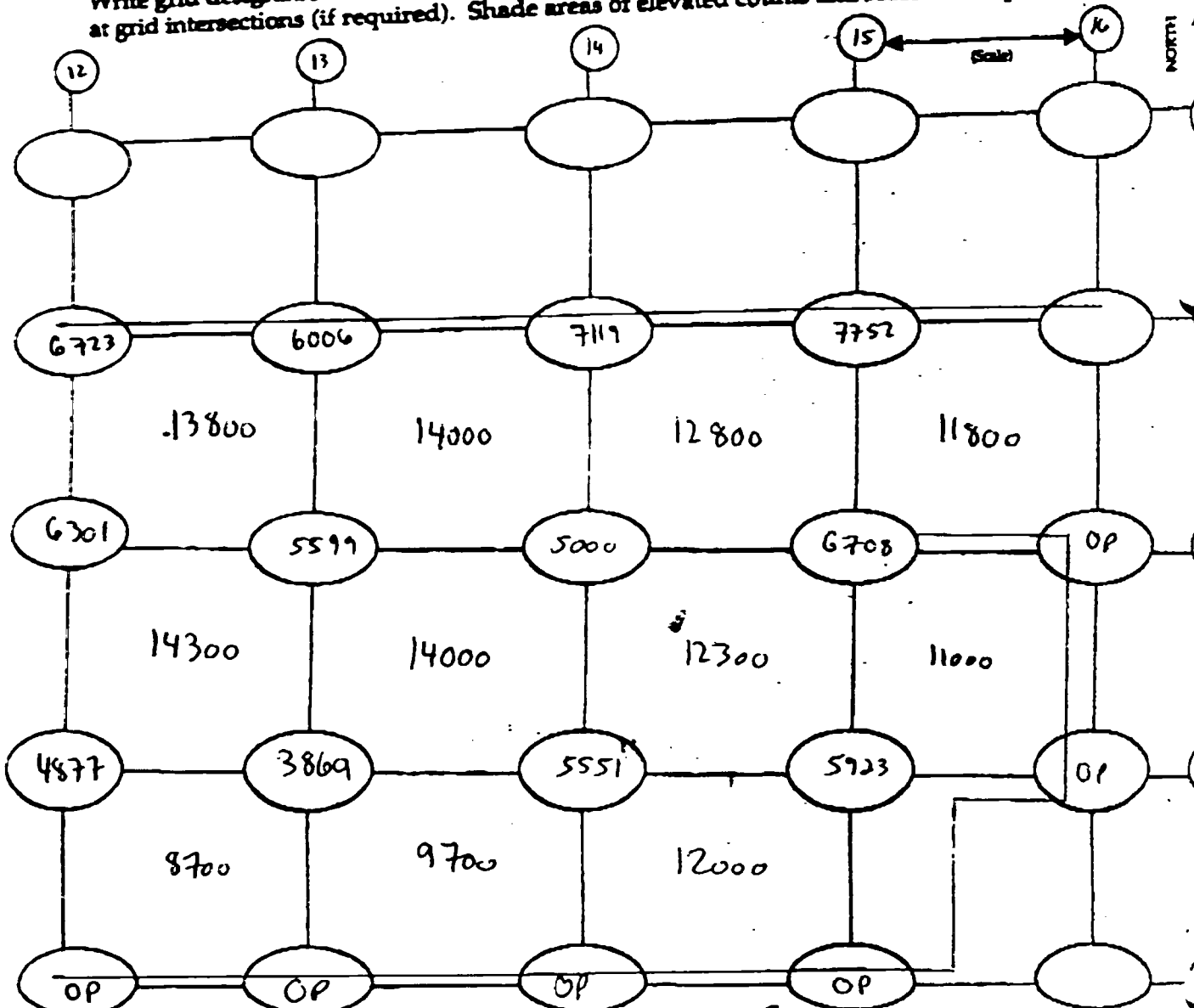


STS Communications Ltd.

Date

2-7/14-15
2-7/14-14
8/14Project # 25585-XIProject Name GMOPage 4 of 7Technician Toby ShumanSerial No. 132344Lift Elevation -4.5'Inst. Model Ludlum 2221Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedBackground 8K-14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Poss
☐ - Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 5 of 7

STS Consultants, Ltd.

 Date 8/23

 K-L/12-13
 K-S/14-16
9/3

 K-L/13-16
9/4

 Technician Toby Shewan

 meter # PR168149

 Serial No. 132844

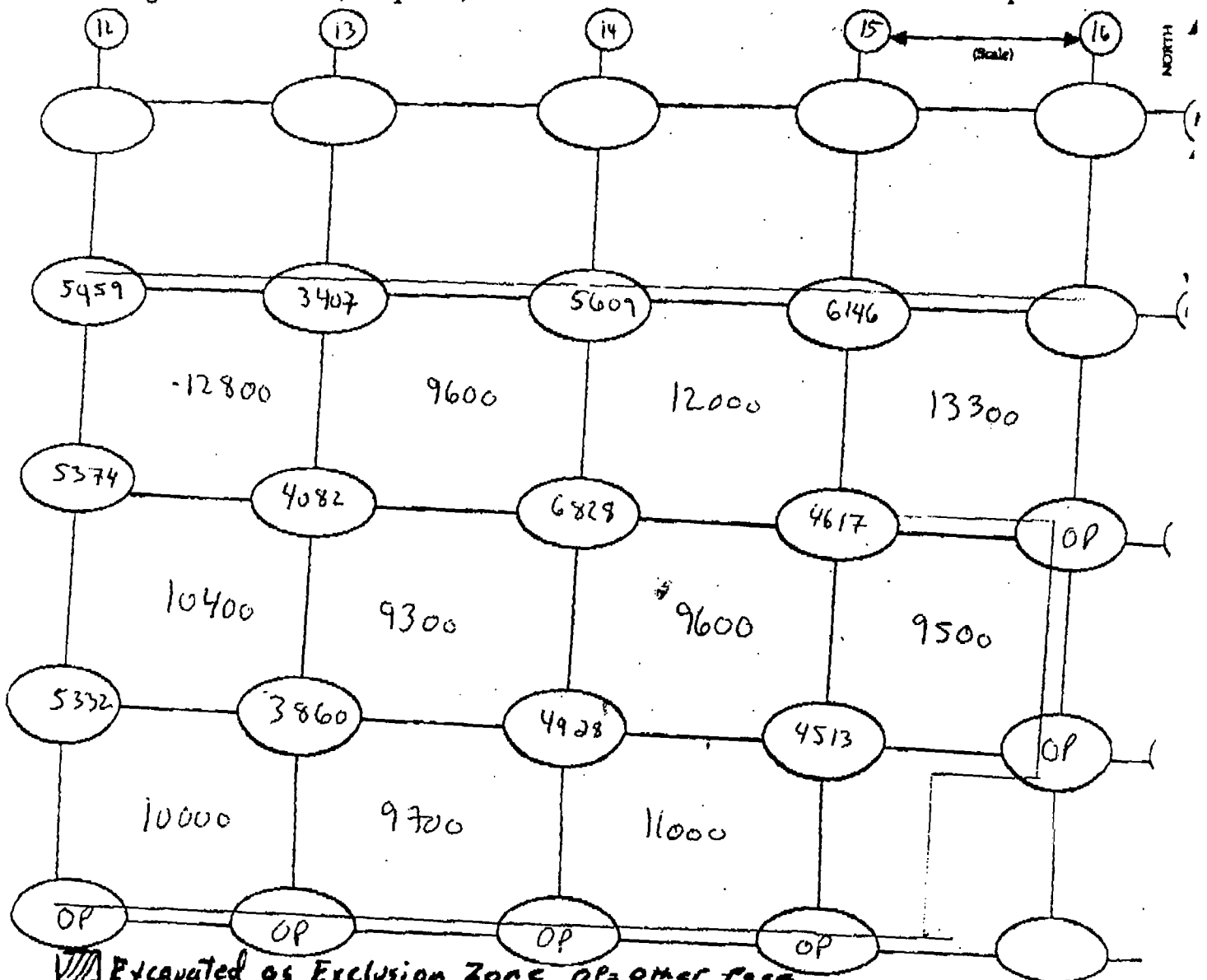
 Lift Elevation -6'

 Inst. Model Ludlum 2221

 Probe Type: 1"x1"NaI / 2"x2" NaI
Shielded / Not Shielded

 Background 6K - 14K variable cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 7

STS Consultants Ltd.

Date 8/23 9/3 9/4

Technician Toby Sherry

Inst. Model Ludlum 2221

meter # Probe #
Serial No. 132844 PR168148

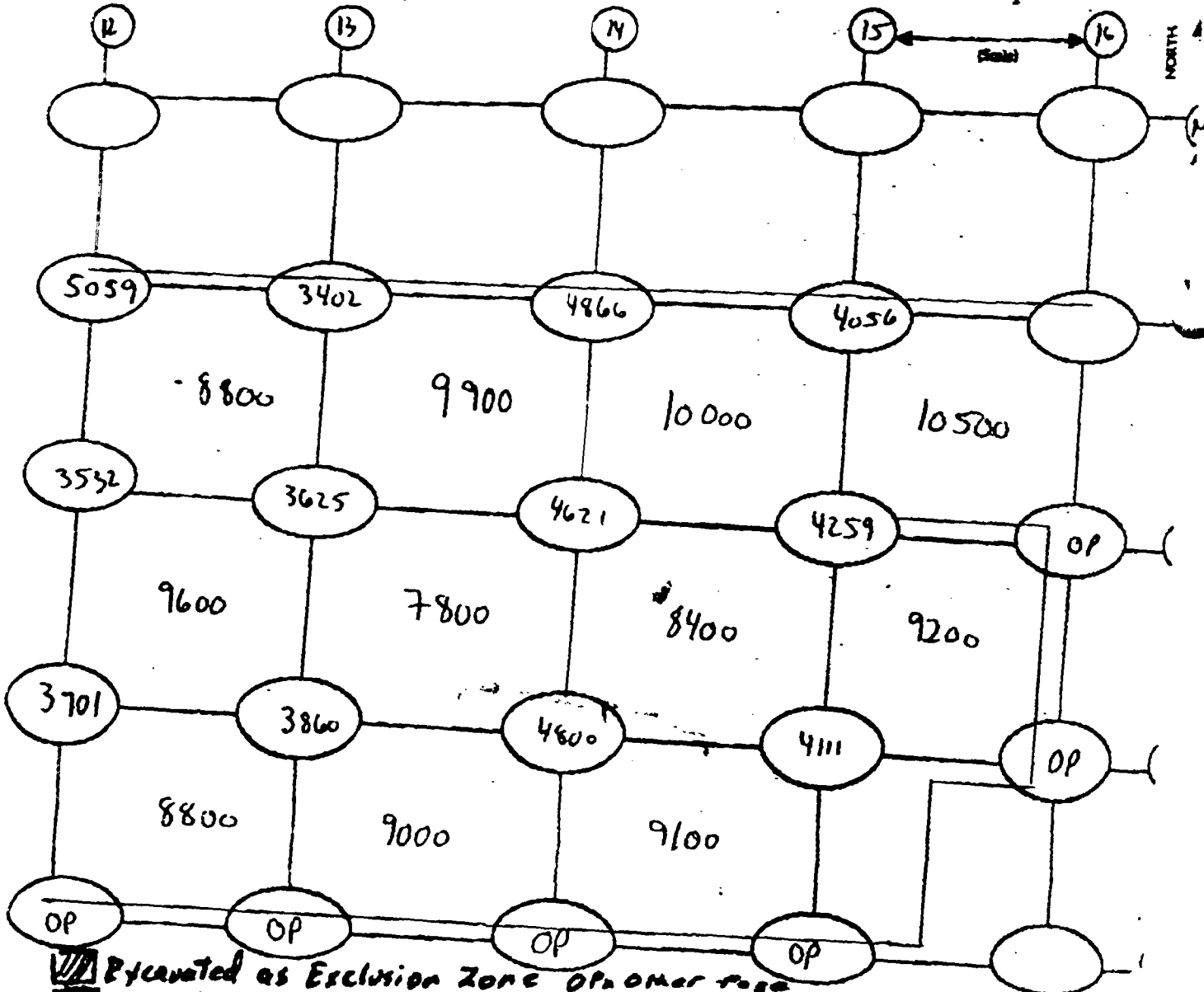
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 8K - 14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP Other Area
Exclusion zone boundary NE = Not excavated, SL = Slope



STS Consultants, Ltd.

1-361-19

K-5/11-14

Date

6/27

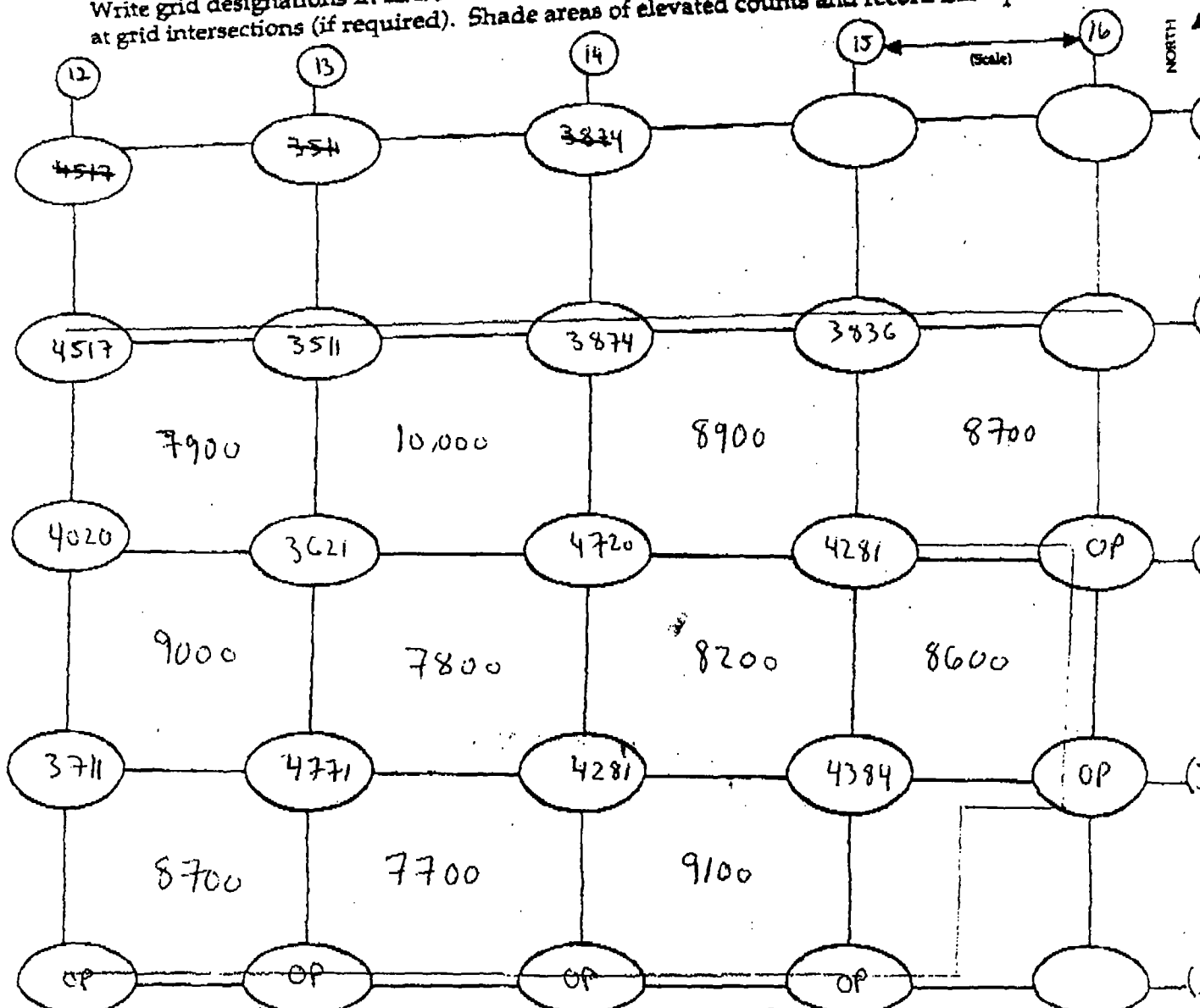
Project # 25585-XIProject Name GMOPage 7 of 7Technician Taby Shawan

Meter #

Probe #

Serial No. 15284418163188Lift Elevation 9Inst. Model Ludlum 2221Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 8k - 14k cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
 --- Exclusion zone boundary NE = Not excavated SL = Slope



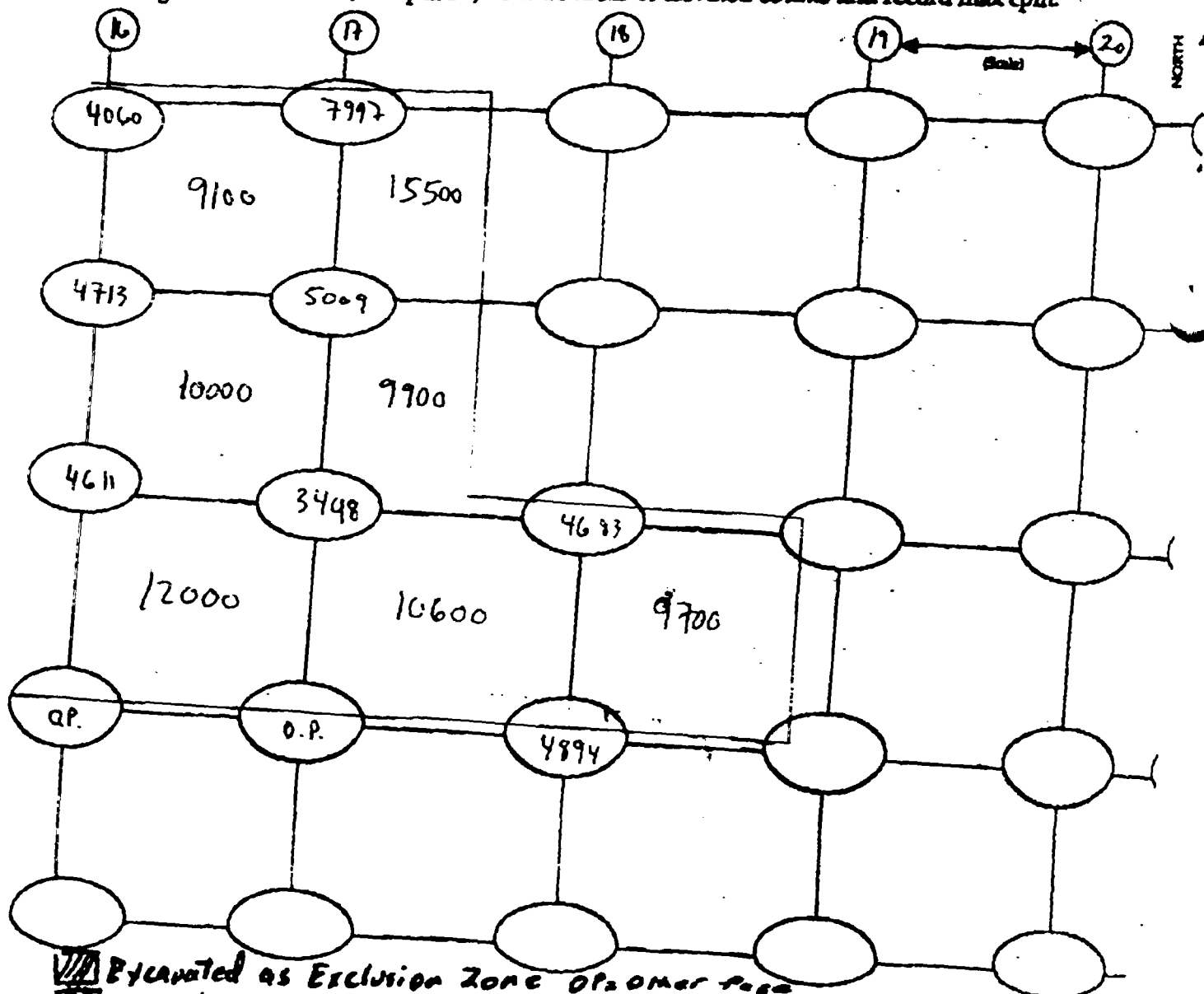
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants Ltd.

Date 1-J 8/27 J-L 9/4Technician Toly ShennInst. Model Ludlum 2221Meter # 132884 Probe # 1N68148Probe Type: 1"x1"NaI / 2"x2"NaI
Shielded / Not ShieldedLift Elevation SurfBackground 92-172 unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone of owner's area
 Exclusion zone boundary NE = Not Excluded SL = Slope



RADIATION SURVEY FORM

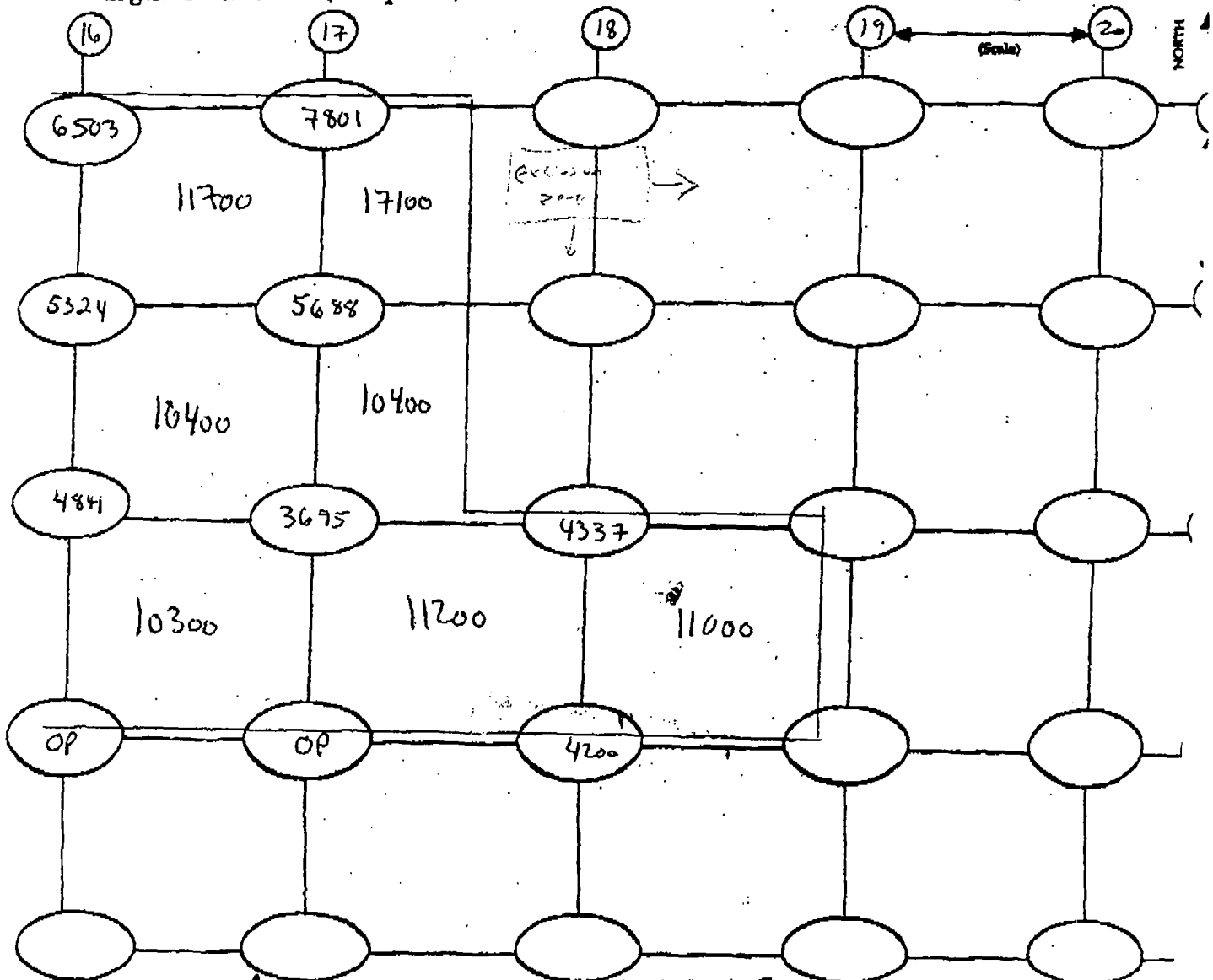
Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 8-5 9/4Technician Tol. ShewenInst. Model Ludlum 2221Serial No. 132844 PR168148Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedLift Elevation -1.5'Background 8K-94K unshielded cpm Action Level 20909 unshielded cpm

* note: K-L high counts due to clay

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

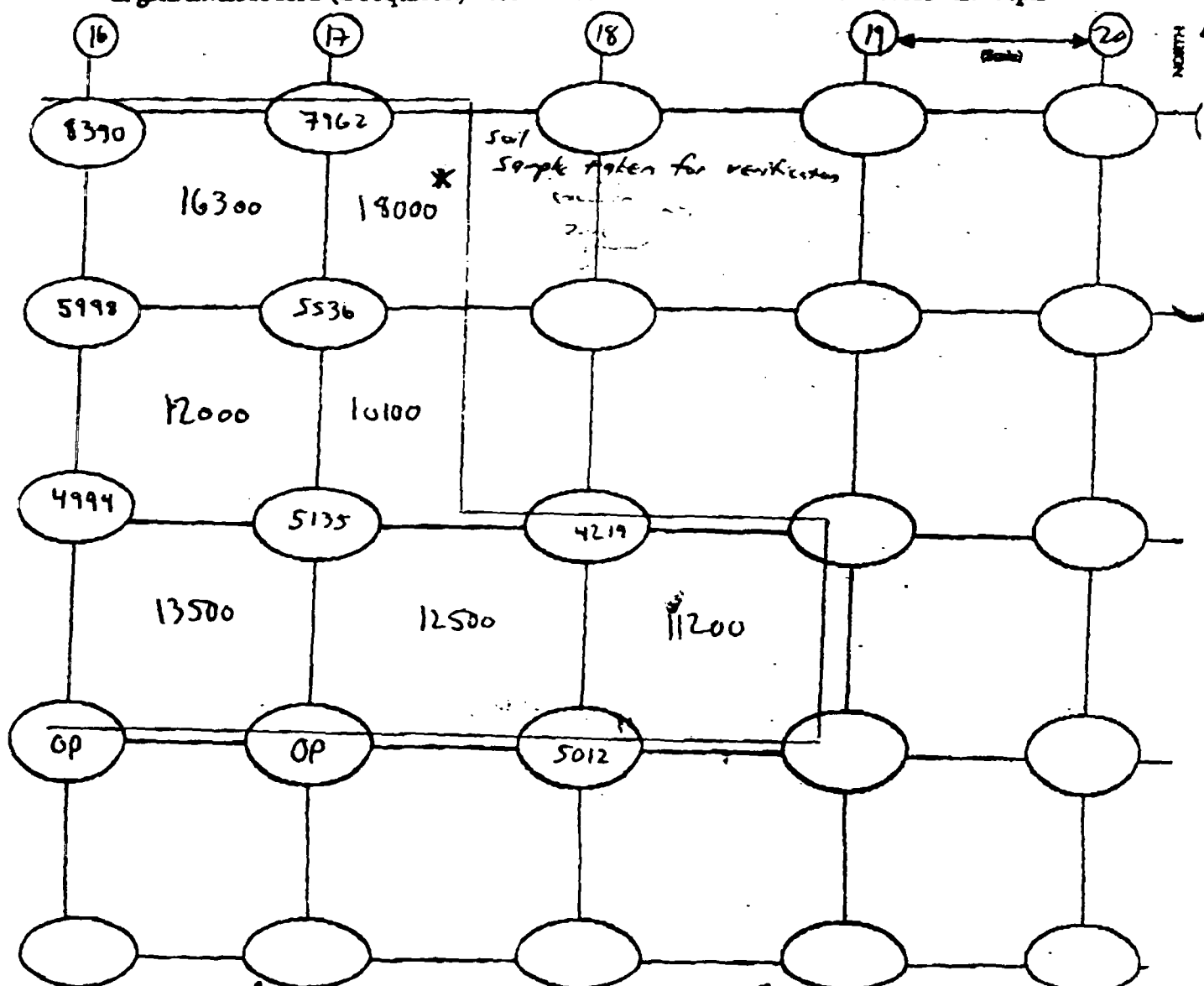
Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/27 9/4Technician Toby ShewanInst. Model Ludlum 2221meter # 132844 Probe # 12168448Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 8K - 14K unshielded cpmAction Level 20709 unshielded cpm

* K-L high counts due to clay

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Pass
 NE=Not excavated SL=Slope



RADIATION SURVEY FORM

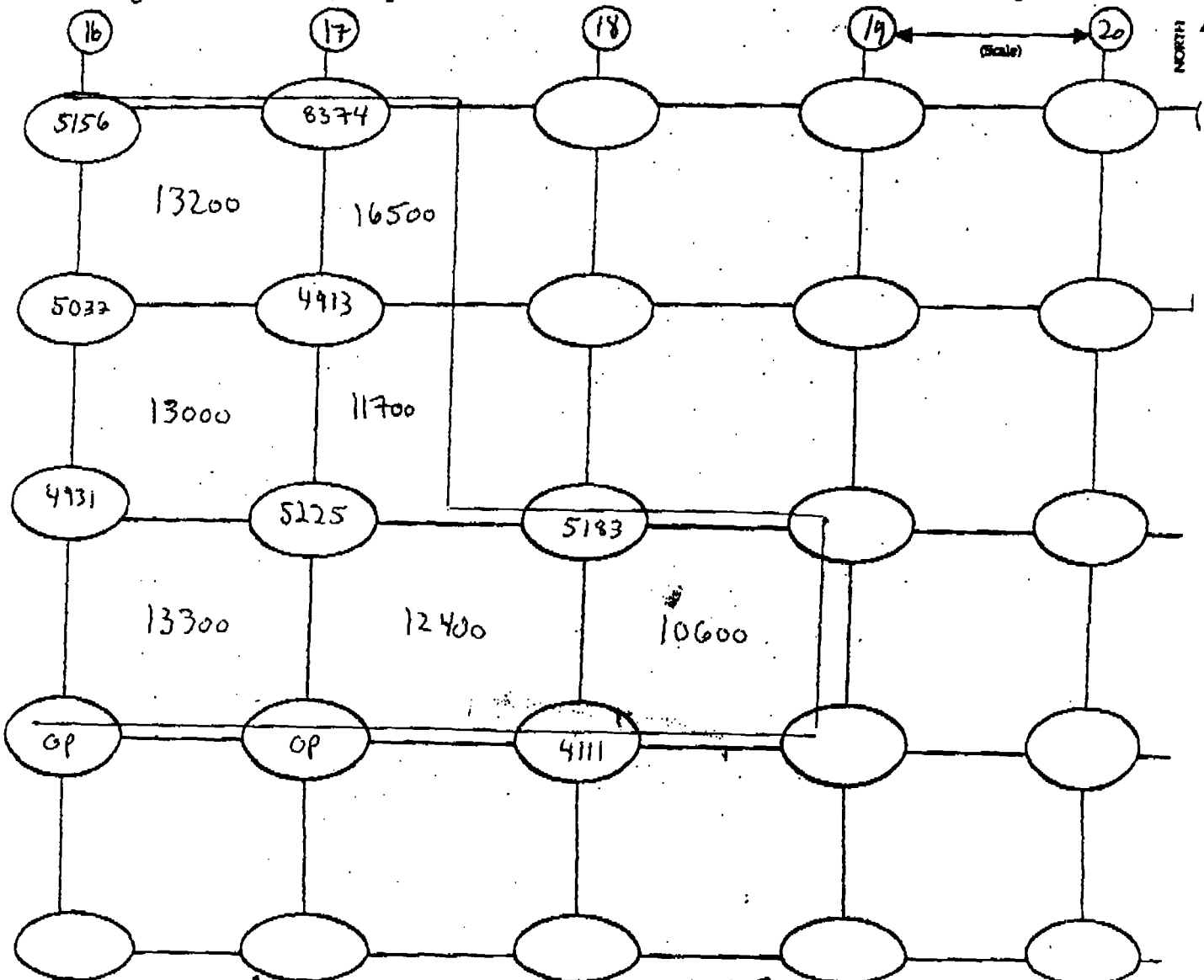
Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date I-5 8/27 8-6 7/4Technician Toby SlatteryInst. Model Ludlum 2221meter # Probe 2
Serial No. 152844 PR162144Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 8K - 14K unshielded cpmAction Level 20909 unshielded cpm

* note: high counts in K-L due to clay

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other side
 NE = Not excavated SL = Slope



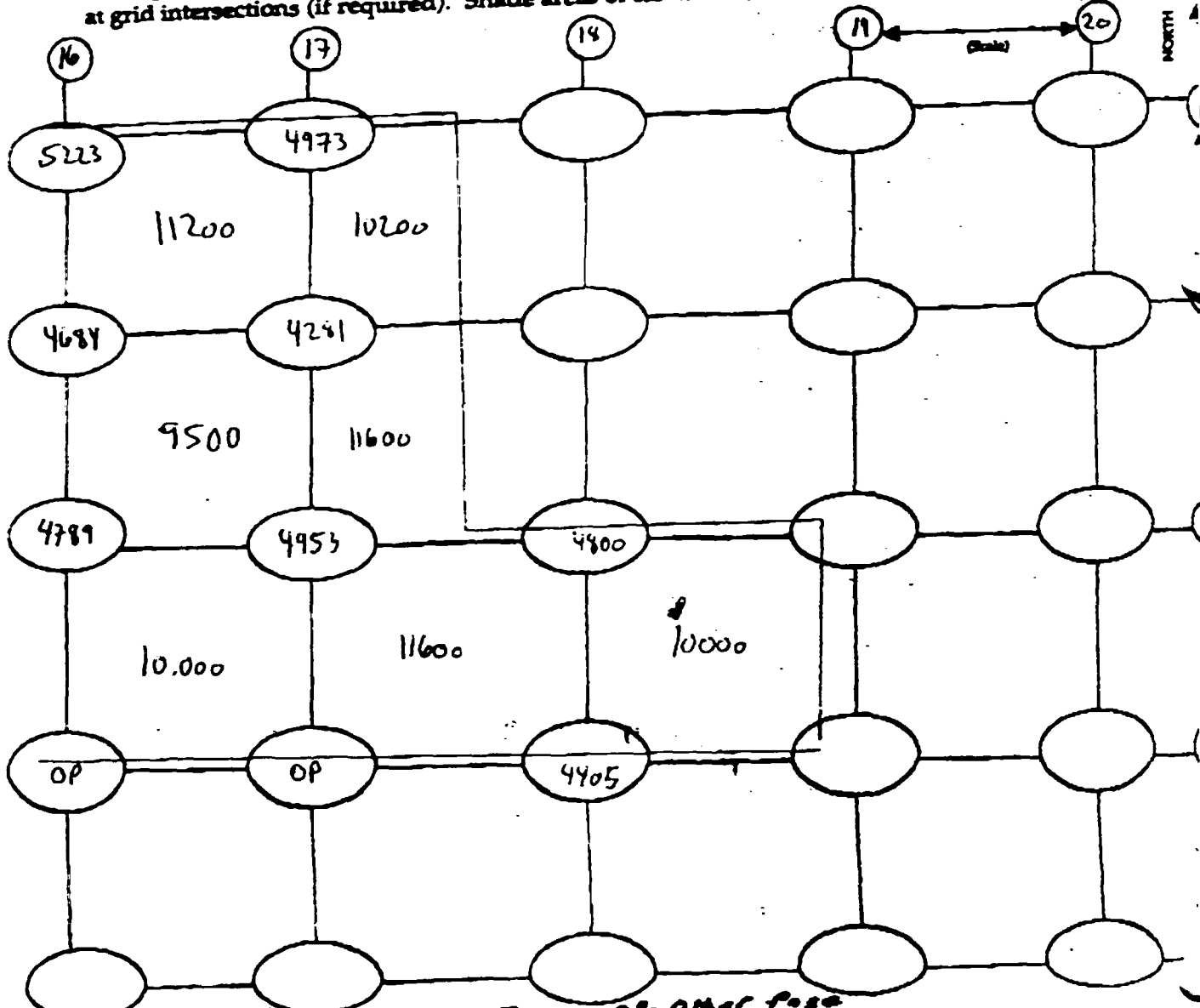
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 5 of 6

STS Consultants, Ltd.

Date I-S 8/27 J-L 9/4Technician Toby, StevenMeter # 132884 Probe # PR168109Inst. Model Ludlum 2221Lift Elevation -6'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 8k-14k unshielded cpmAction Level: 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 - - - - - Exclusion Zone boundary NE = Not excavated SL = Slope



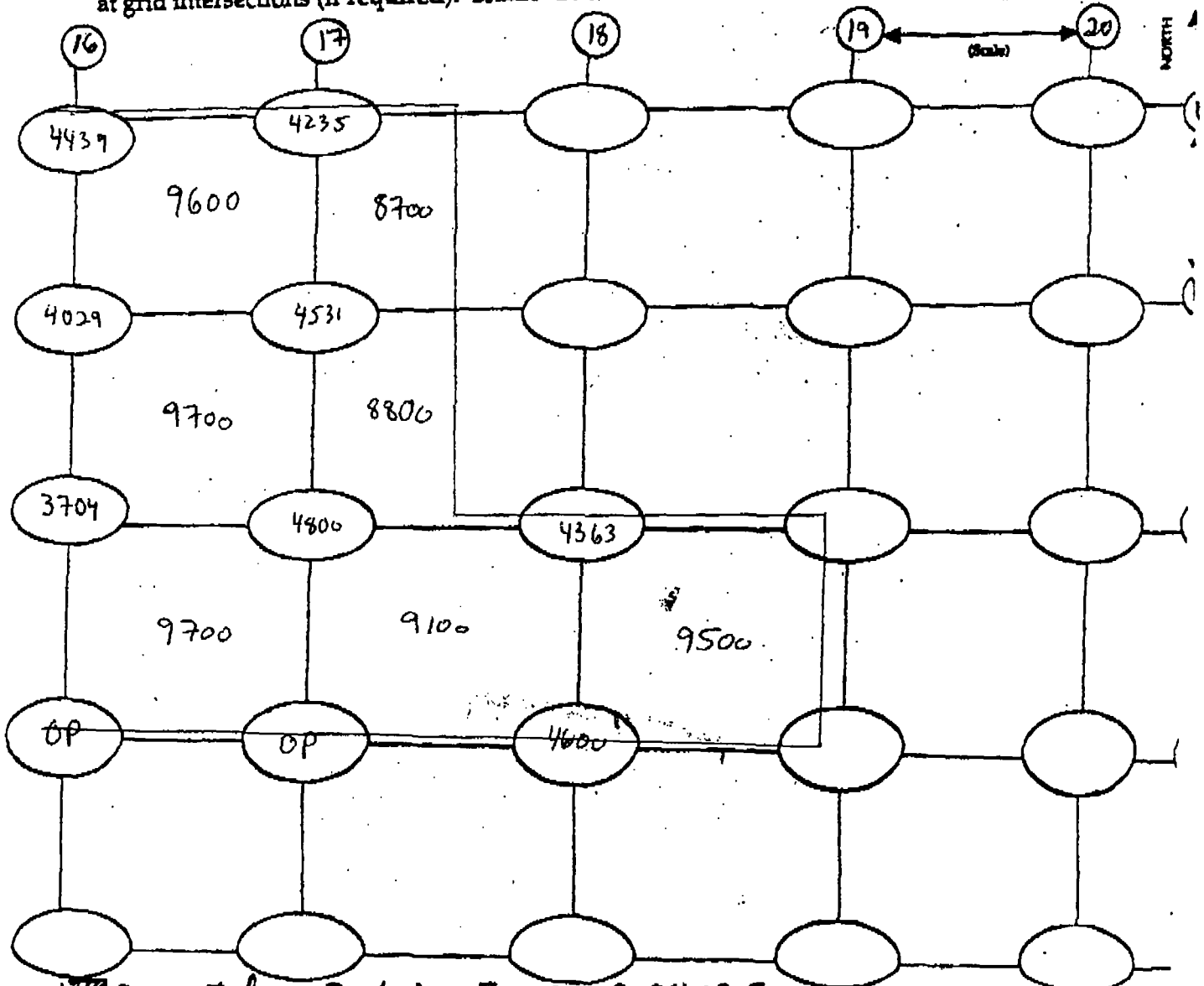
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 6

STS Consultants, Ltd.

Date I-5 8/27 J-2 7/4Technician Toly SlawarInst. Model Ludlum 2221Serial No. 132844 PR163149Probe Type: 1'x1"NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 8K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

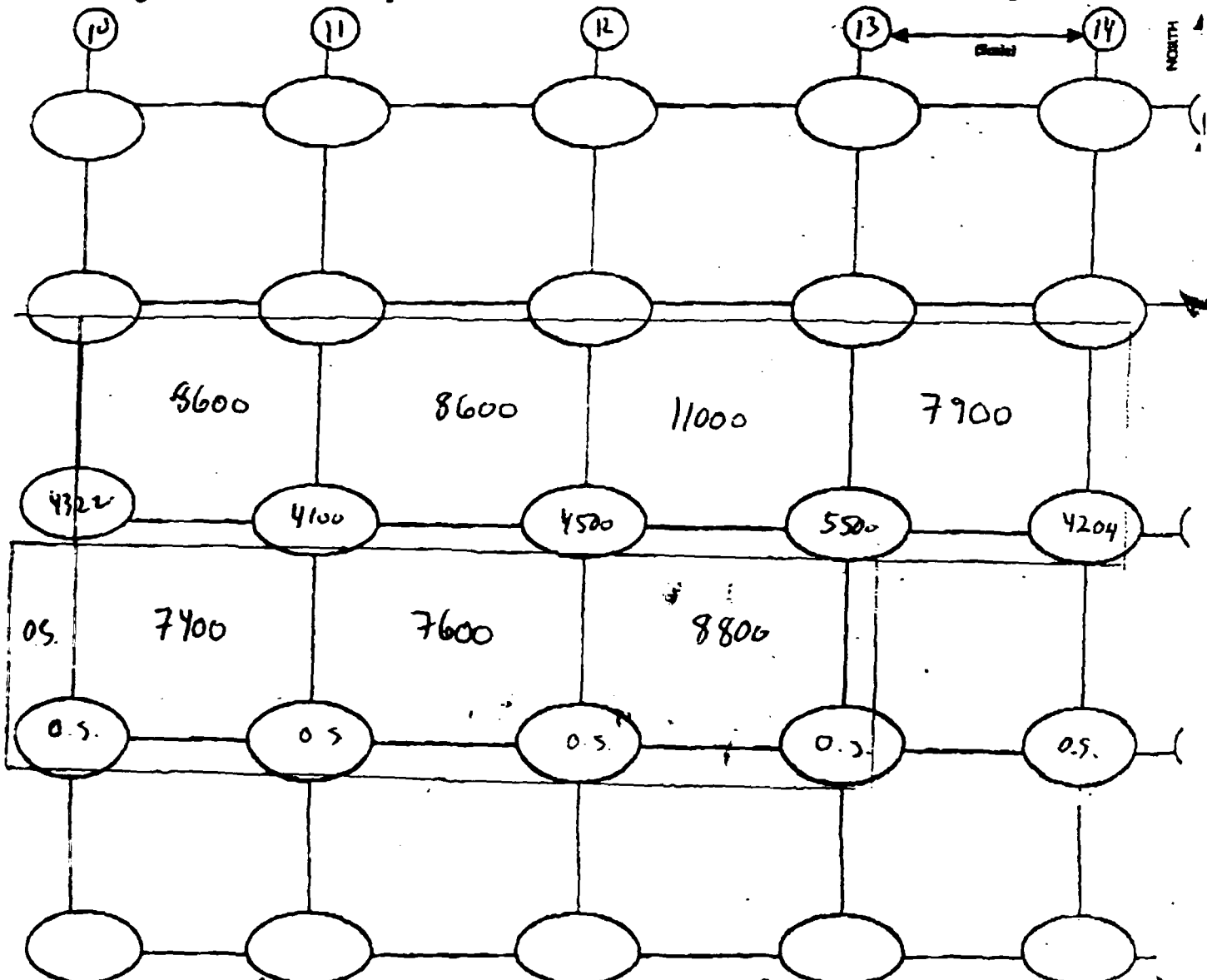
Project # 25585-X7 Project Name GMO Page 1 of 7

STS Consulting Ltd.

 Date 8/27/02 8/28/02 8/29/02

 Technician Toby Selway
 meter # PR168148
 Serial No. 132844
Inst. Model Ludlum 2221
 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Lift Elevation Surface
 Background GF-148 unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.


 Excavated as Exclusion Zone of other page
 NE = Not excavated SL = Slope



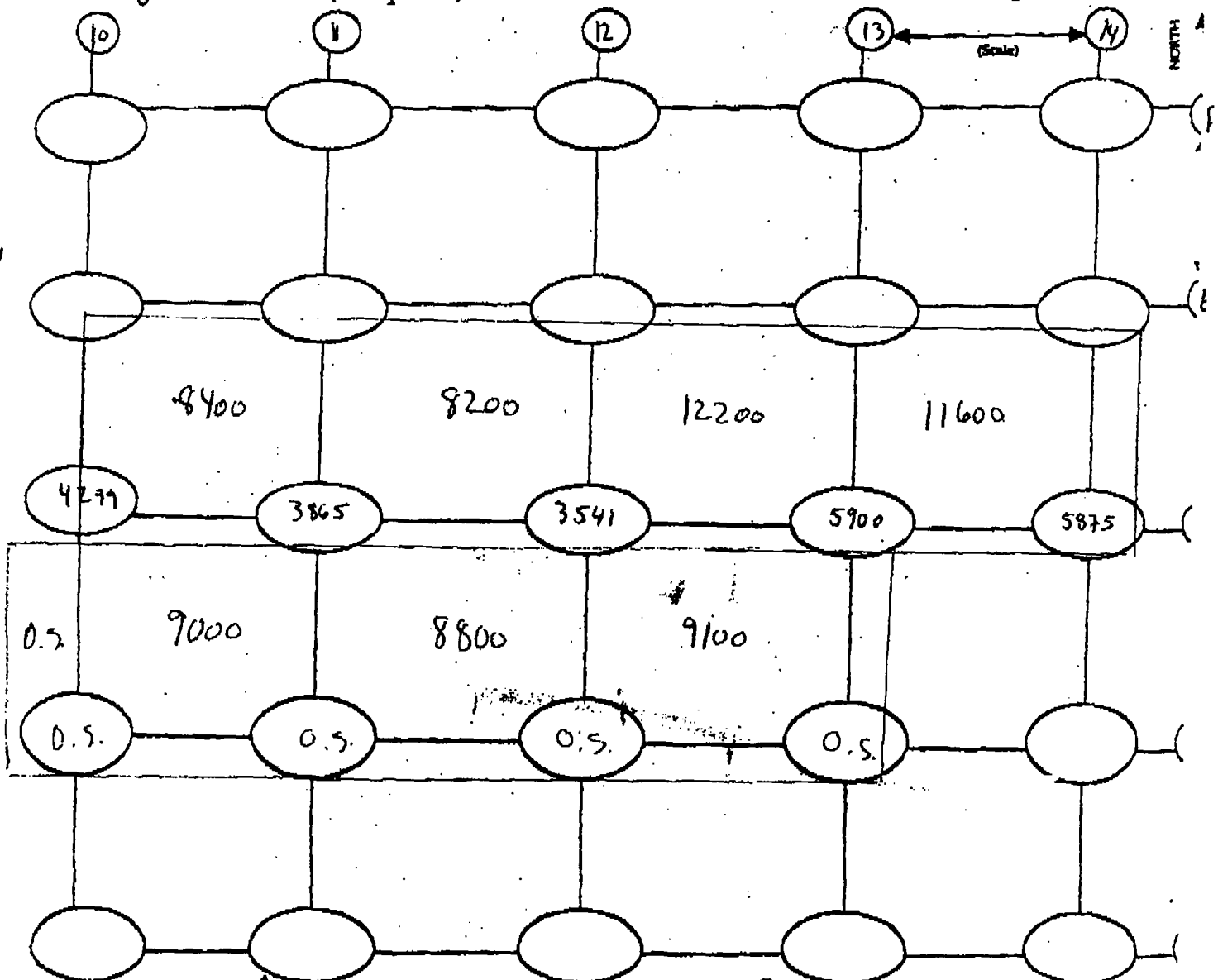
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 7

STS Consultants, Ltd.

 D-0/10-14 C-0/12-13 C-0/10-12
 Date 7/22 8/27 8/28 8/29
Technician Toby Slesman
 meter # 132844 Probe # 92168148
 Serial No.
Inst. Model Ludlum 2221Lift Elevation -1.5'Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedBackground 6K-14K' unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
 - - - - - Laundry NE = Not excavated SL = Slope



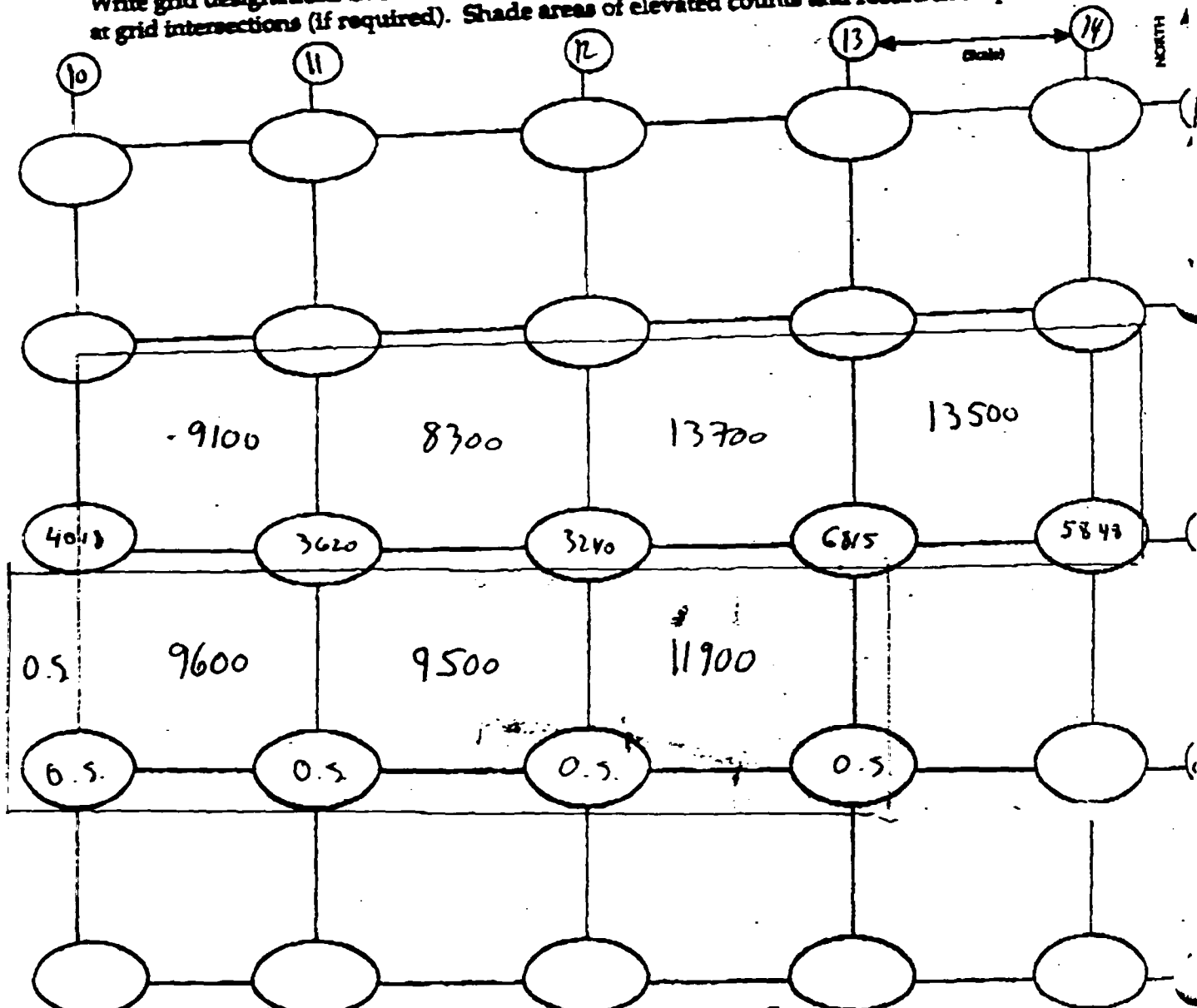
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 7

STS Consultants Ltd.

 Date 7/2 8/12 8/25 8/27
Technician Tom ReyerSerial No. 122444Lift Elevation -3'Inst. Model Ludlum 2221Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 8K-MK unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OPZ OMER Phase
 NE = NOT excavated SL = Slope



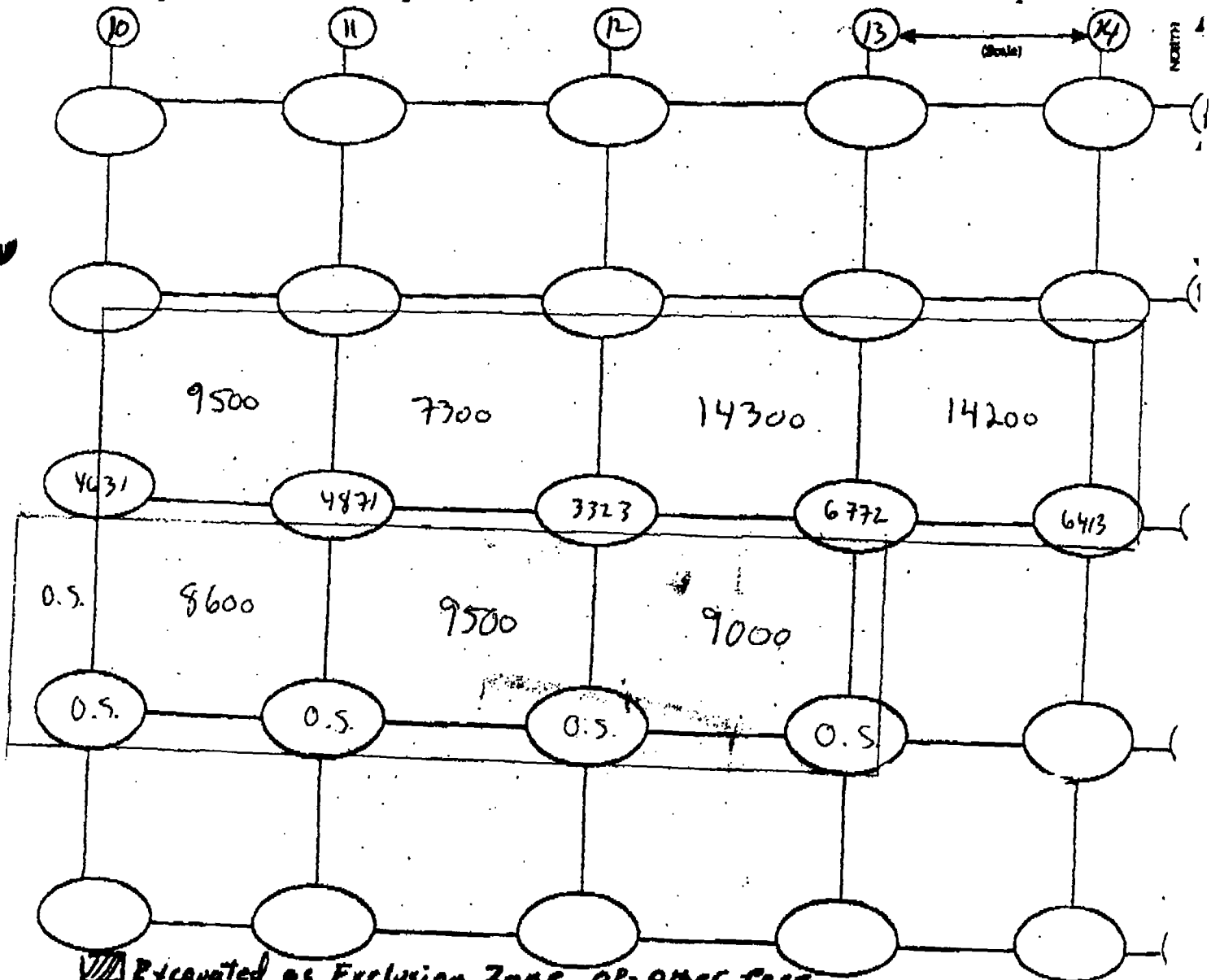
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 7

STS Consultants, Ltd.

Date 8/22 9/23 8/23 9/23Technician Toby SheltonInst. Model Ludlum 2221Serial No. 132844 9267148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 4K - 14K unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Omer Page
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

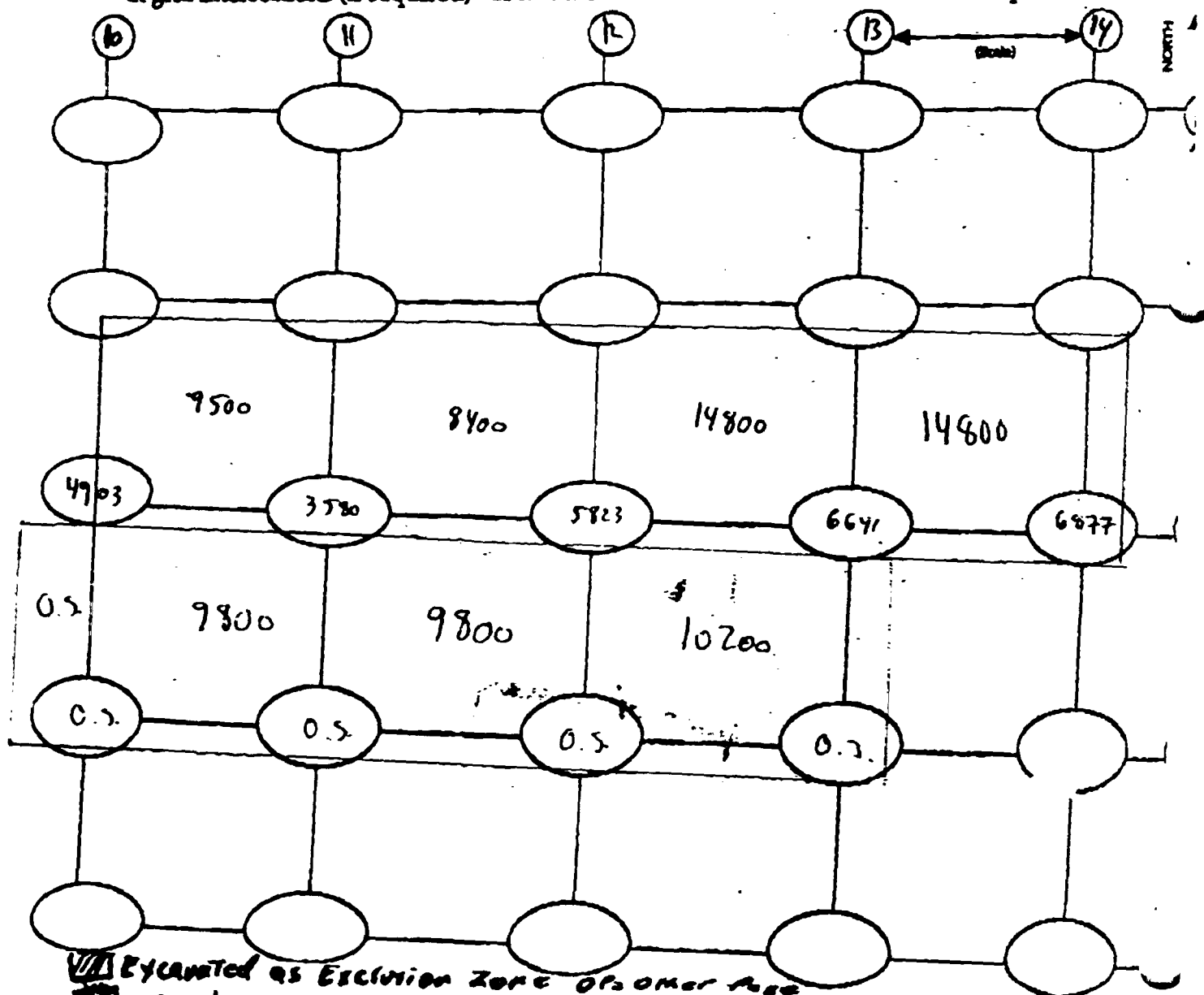
 Project # 25585-XI Project Name GMO Page 5 of 7

STS Consultants Ltd.

 Date 8/23 9/23 9/24 9/29
Technician Toly Shuren
 Meter # 132849 Probe # PR168148
Inst. Model Ludlum 2221Lift Elevation -6'
 Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

 Background SK-NK unshielded cpm Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone Operator Area
 NF: Not excavated SL: Slope



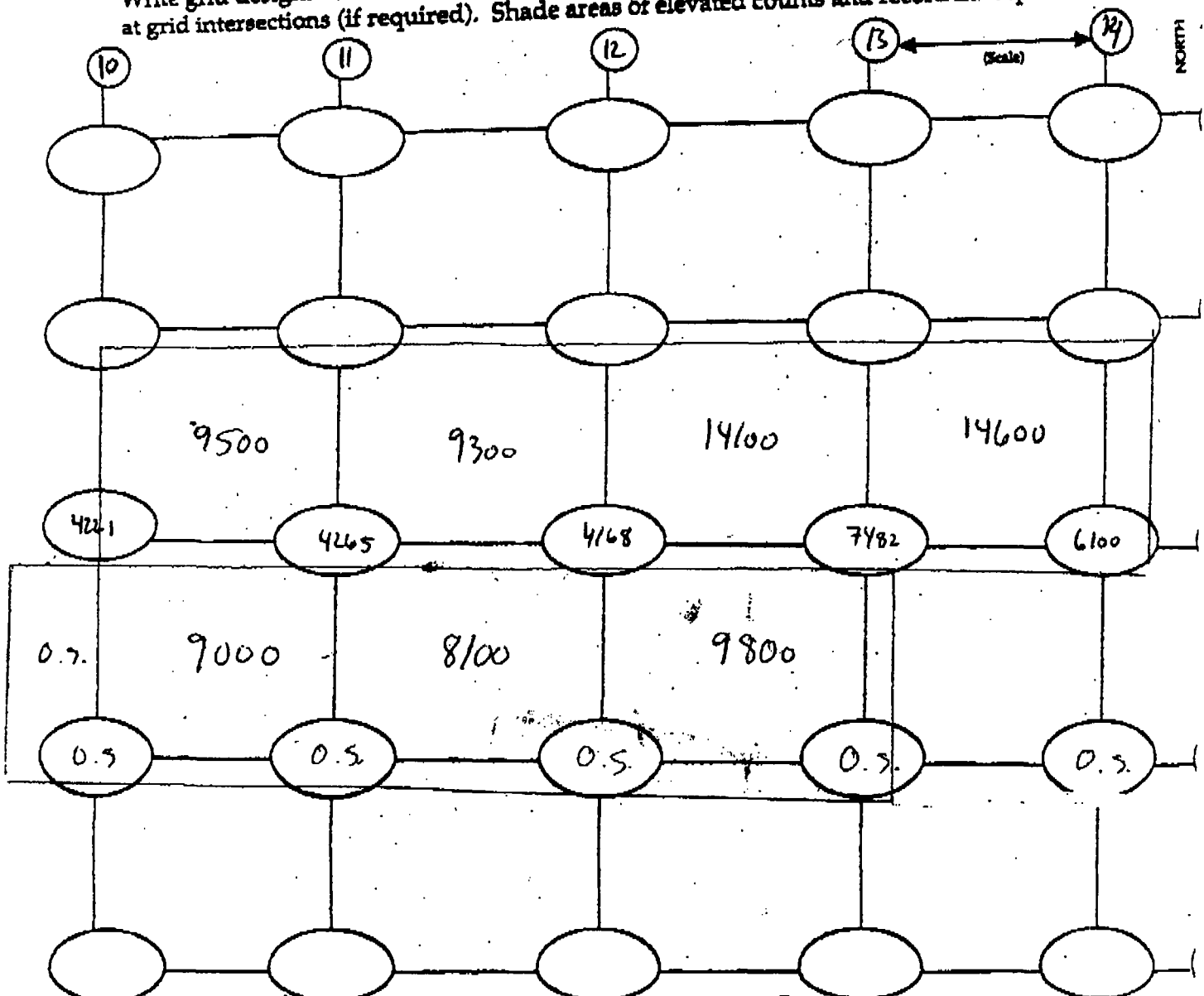
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 7

STS Consultants, Ltd.

Date 8/278/278/27Technician Toby ShumanSerial No. 152844Probe # PR163148Inst. Model Ludlum 2221Lift Elevation -7.5'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 8K - 14K unshielded cpmAction Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 Exclusion zone boundary NE=Not excavated SL=Slope



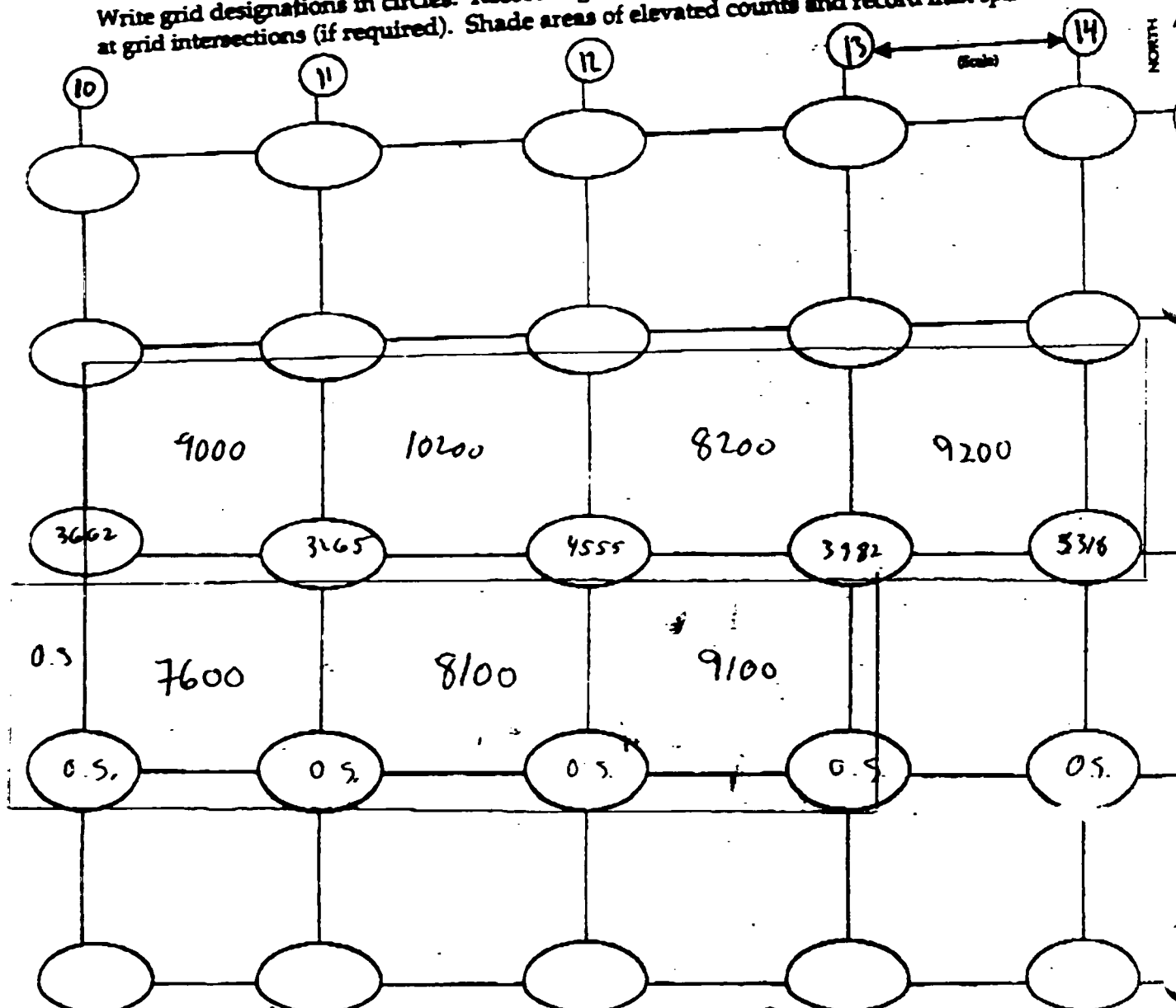
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 7 of 7

STS Consultants, Ltd.

Date 9/12 8/12/139/12/139/12/13Technician Toby ShawSerial No. 132844Probe # PR166149Inst. Model Ludlum 2221Lift Elevation -9'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground SK - MK v-shield cpmAction Level 20907 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP=Other Poss
☒ Exclusion zone boundary NE=Not excluded SL=Slope

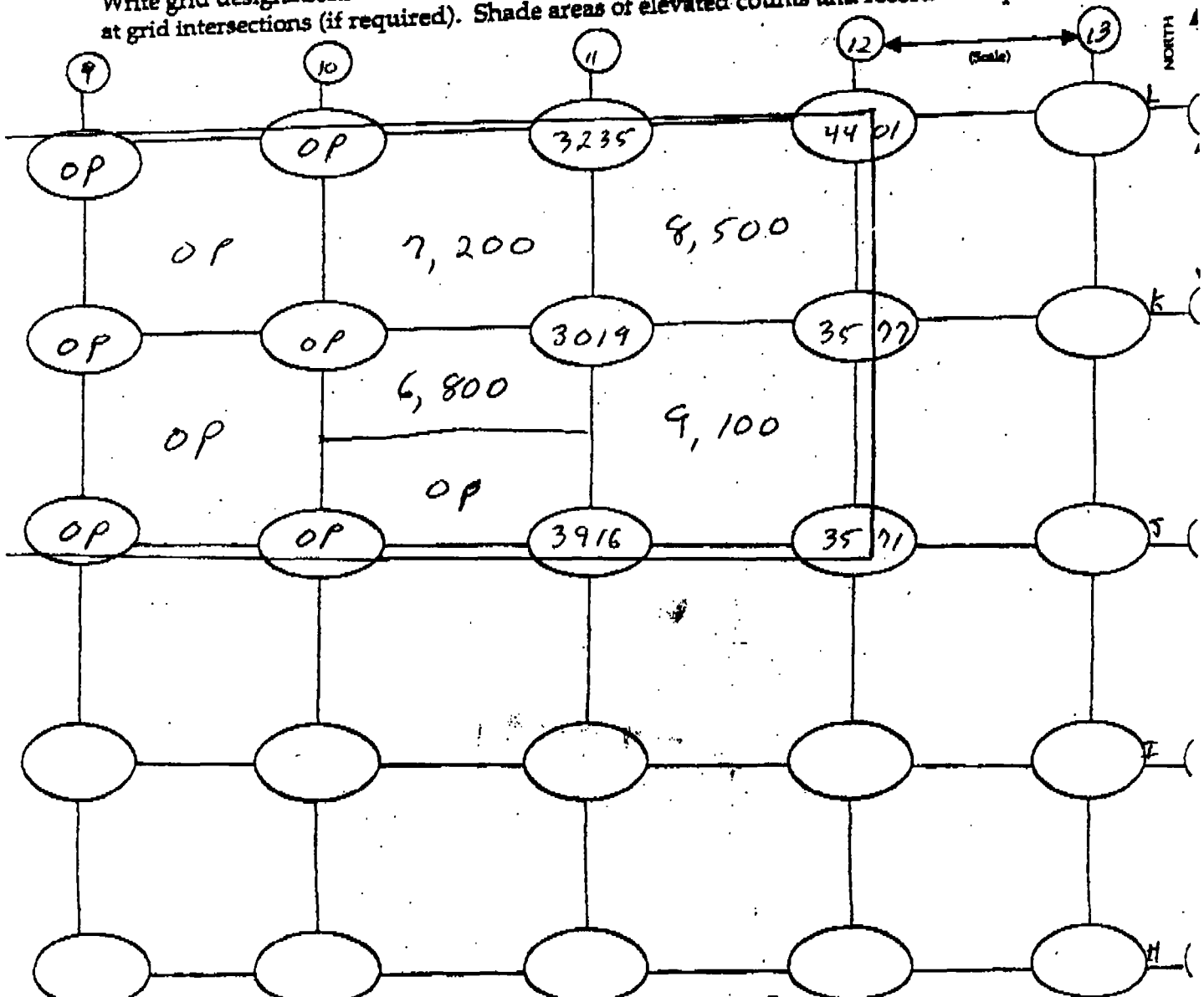


STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage X1 of 6Date 8-29-02Technician L D Smithmeter # 126496 Probe # 168143Inst. Model Ludlum 2221Lift Elevation SurfaceProbe Type: 1"x1" Nal 2"x2" Nal
Shielded Not ShieldedBackground 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 - Exclusion zone boundary NE = Not excavated SL = Slope

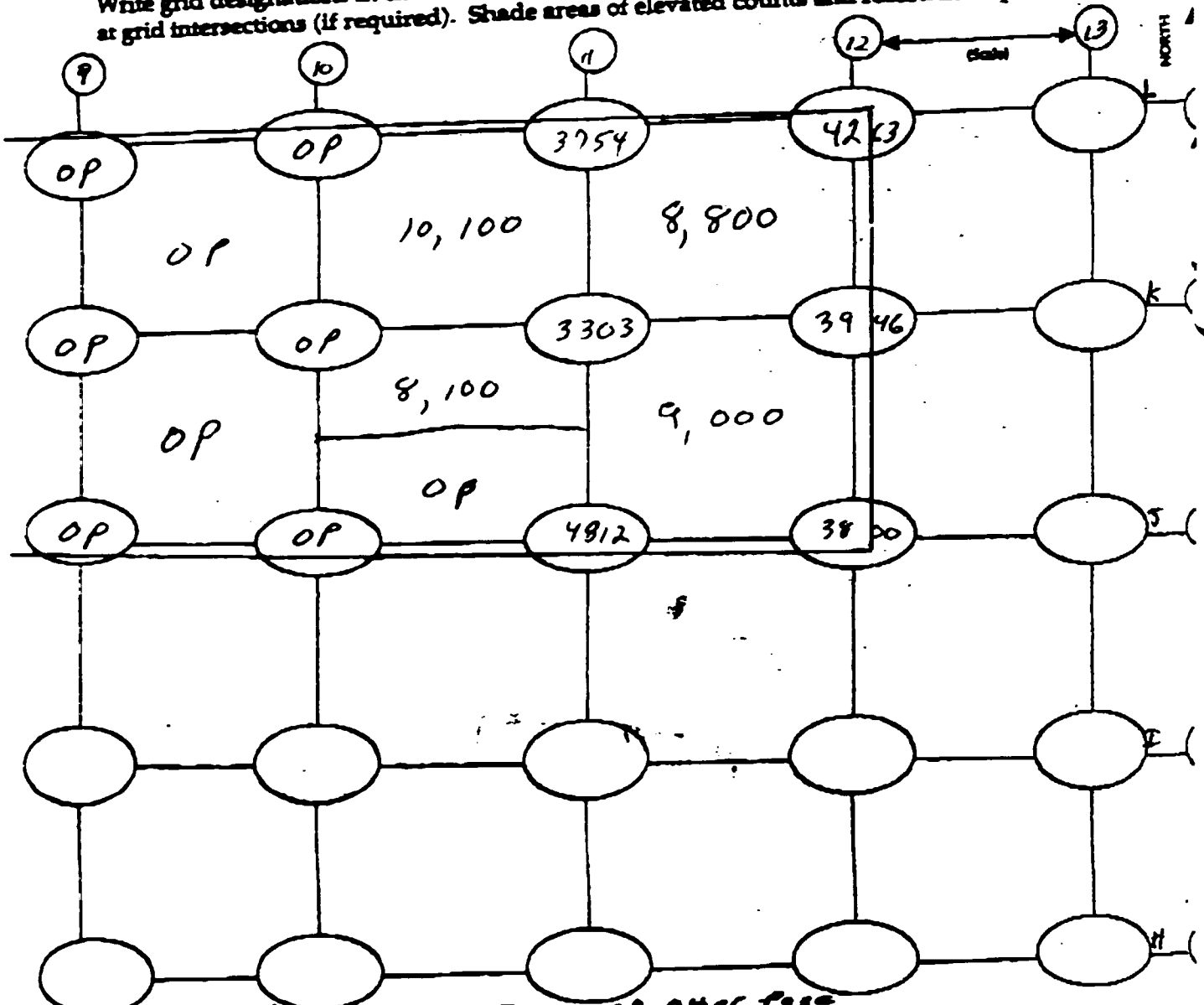


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 82 of 6Date 8-29-02Technician L D Smithmeter # 126496 Probe # 168143Inst Model Ludlum 2221Lift Elevation -1.5'Probe Type: 1'x1' Nal (2'x2' Nal)
Shielded / Not ShieldedBackground 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP = Other Probe
☒ Exclusion zone boundary NE = Not excluded SL = Slope



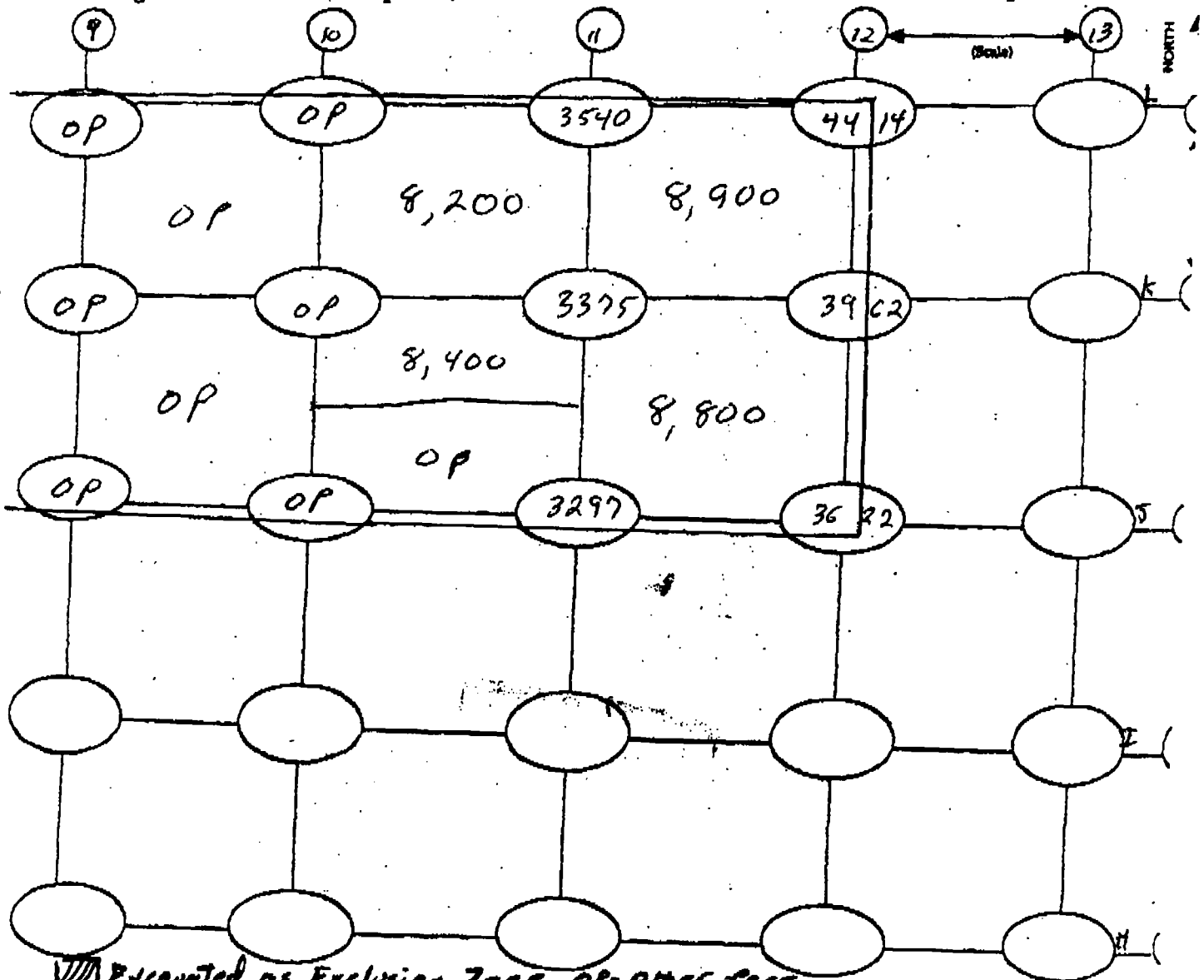
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage X3 of 6

STS Consultants, Ltd.

Date 8-29-02Technician L D SmithInst. Model Ludlum 2221meter # 126496 / Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation - 3'Background 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 = Exclusion zone boundary NE = Not excavated SL = Slope

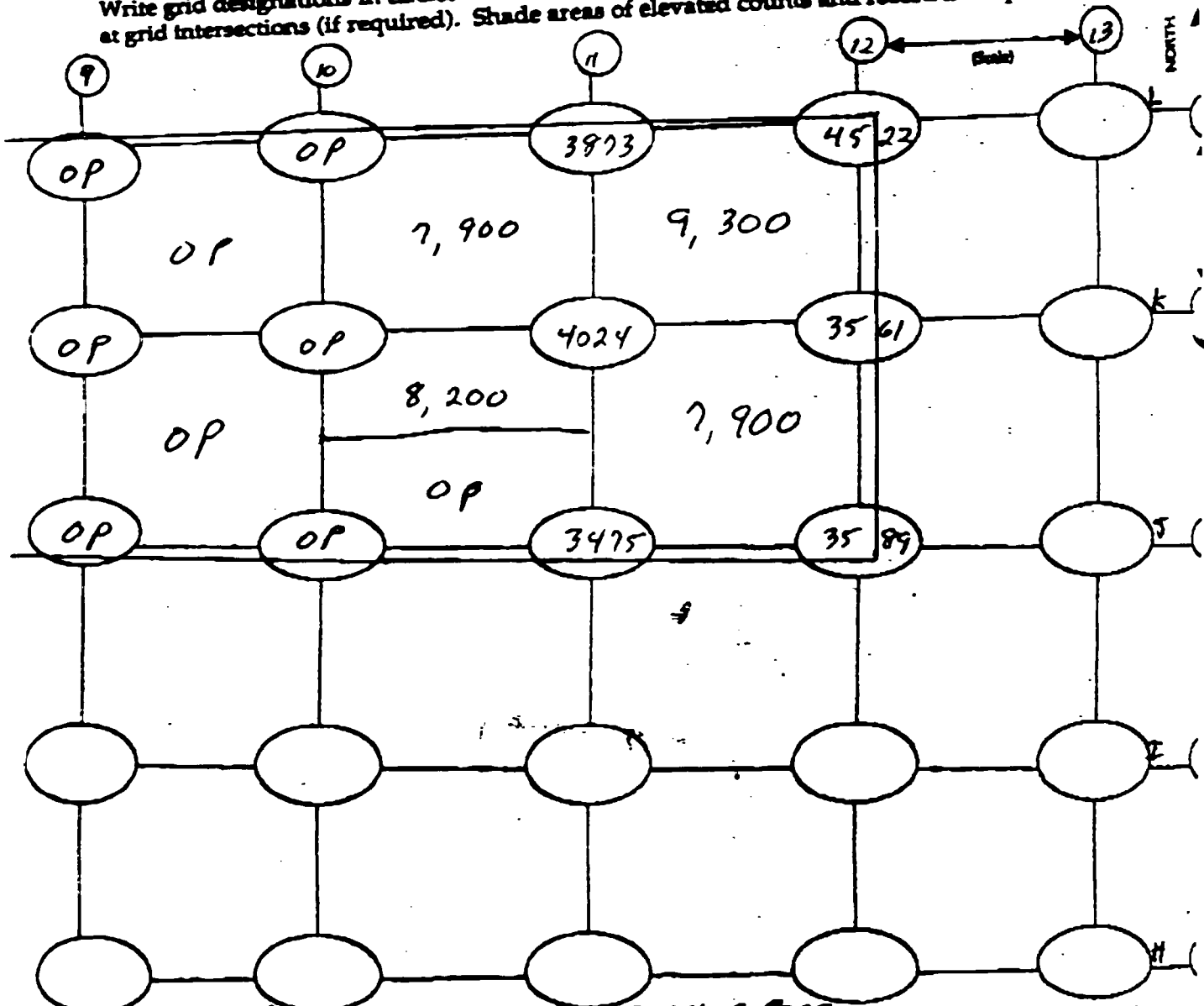


STS Consulting, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 6Date 8-29-02Technician L D SmithSerial No. 126496 168143Inst. Model Ludlum 2221Lift Elevation -4.5'Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not ShieldedBackground 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Over Pass
☒ Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

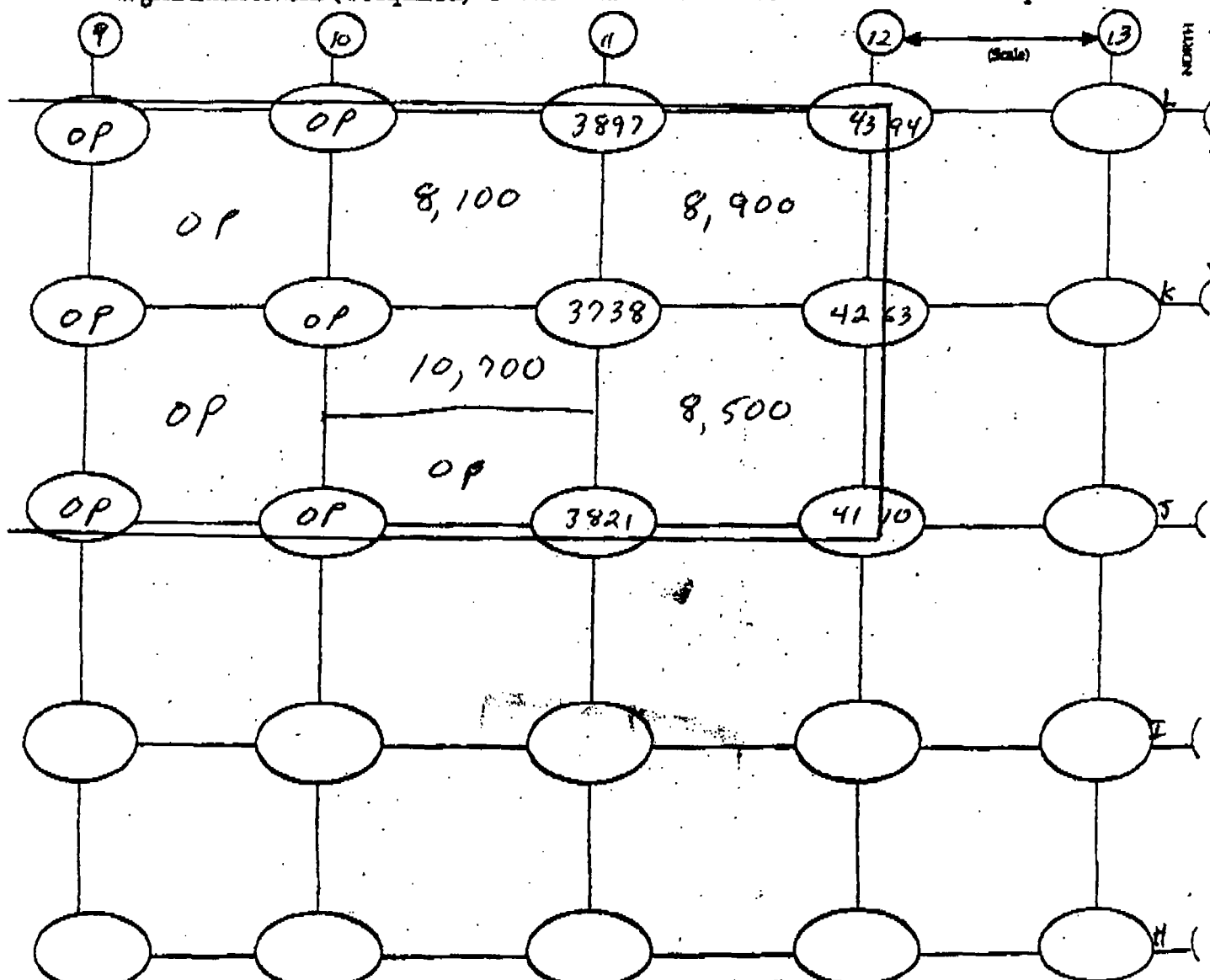
Project # 25585-XIProject Name GMOPage 5 of 6

STS Consultants, Ltd.

Date 8-29-02Technician L D SmithInst. Model Ludlum 2221
 Meter # 126496 / Probe # 168143
 Serial No.

 Probe Type: 1'x1' NaI 2'x2' NaI
 Shielded ☒ Not Shielded
Lift Elevation -6'Background 4k - 9k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 * = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 1 of 6

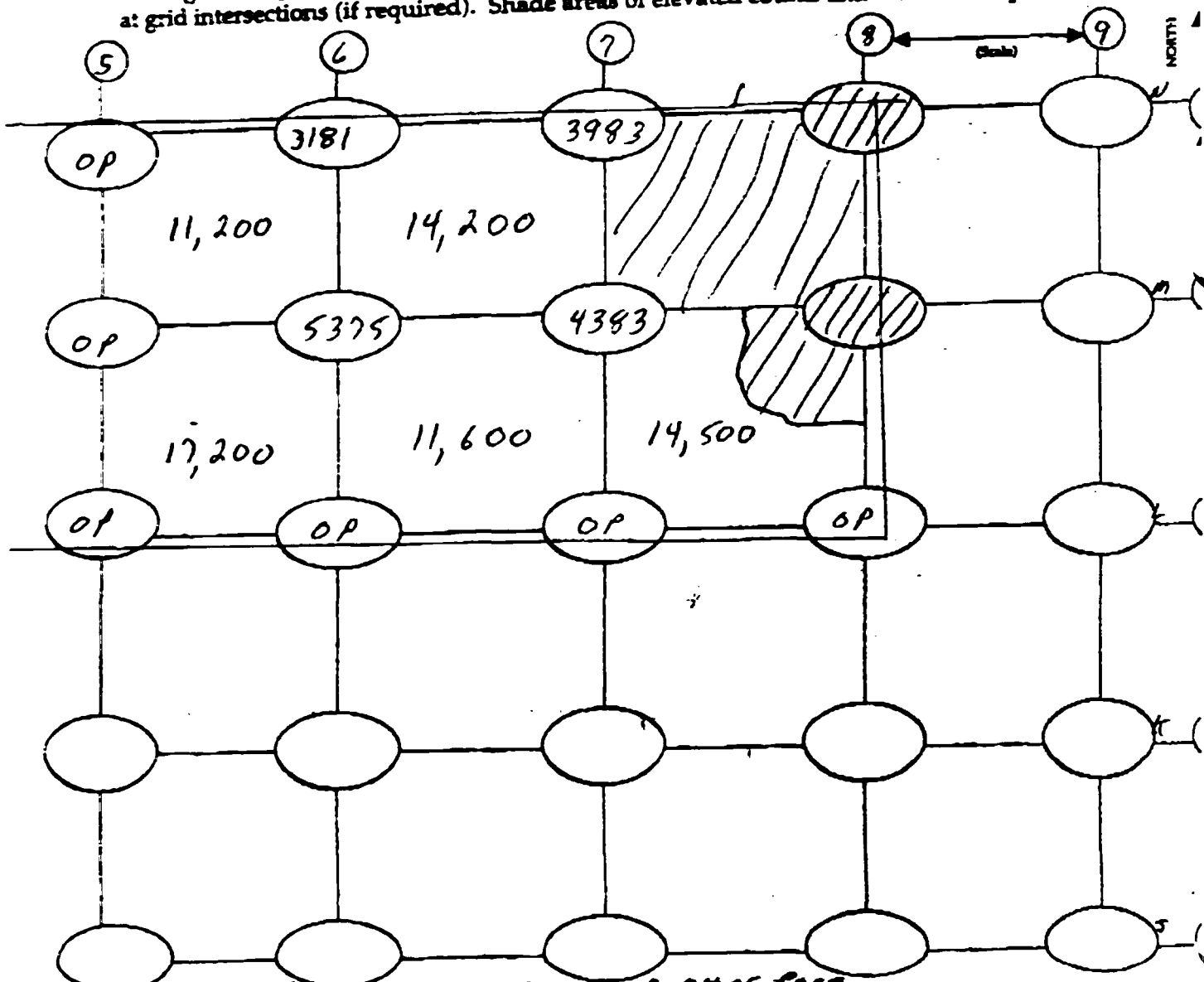
STS Consultants, Ltd.

 Date Grids 5-6 L-N Done / Grids 6-8 L-N Done
9-4-02 9-5-02

 Technician L.D. Smith / T. Sheehan
 motor # Probe #
 Serial No. 126496 168143
Inst. Model Ludlum 2221Lift Elevation Surface
 Probe Type: 1"x1" Nal / 2"x2" Nal
 Shielded ☒ Not Shielded

 Background 6k-9k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Poss
 --- Exclusion zone boundary NE = Not excavated SL = Slope



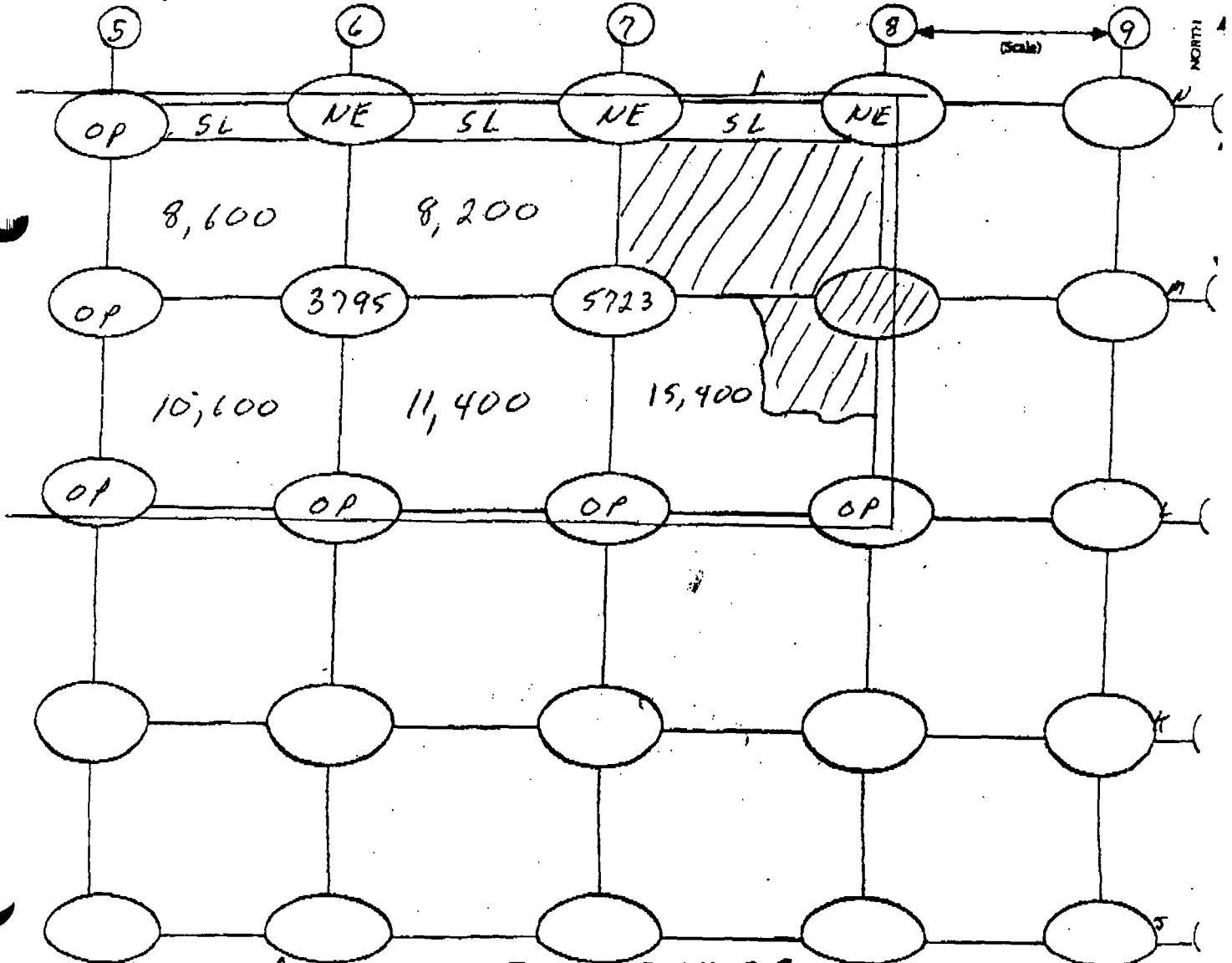
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date Grids 5-6 L-N Done / Grids 6-8 L-N Done
9-4-02 / 9-5-02Technician L.D. Smith / T. SheehanInst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1'x1' Nal / 2'x2' Nal
Shielded / Not ShieldedLift Elevation -1.5'Background 6K-9K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 NE = Not excavated SL = Slope



RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 3 of 6

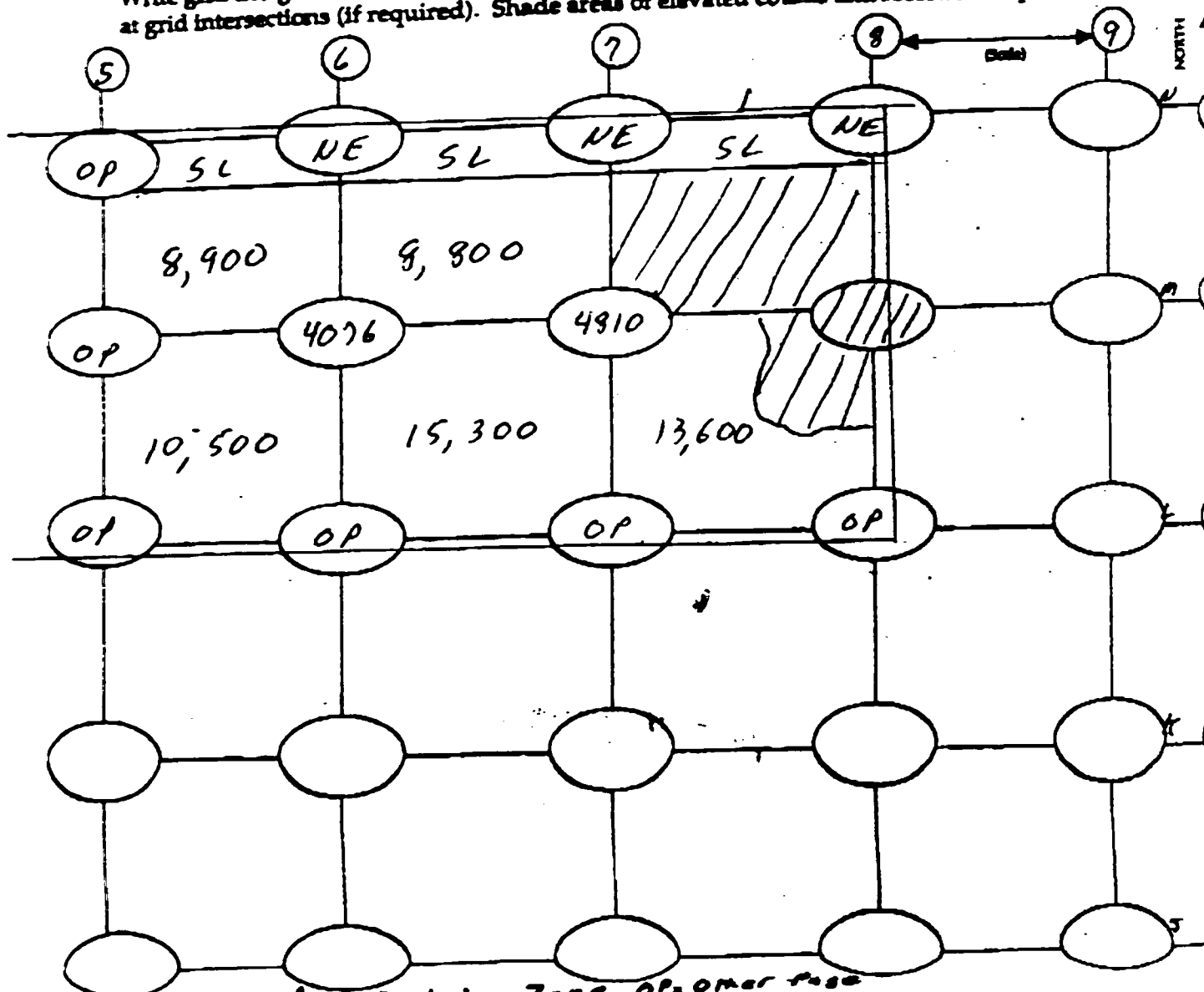
STS Consultants, Ltd.

 Date Grids 5-6 L-N Done / Grids 6-8 L-N Done
9-4-02 9-5-02

 Technician P.D. Smith / T. Shearn
meter # Probe #

 Serial No. 126496 168143
Inst. Model Ludlum 2221Lift Elevation - 3'
 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Background 6K-9K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other phase
 Exclusion zone boundary NE = Not excavated SL = Slope



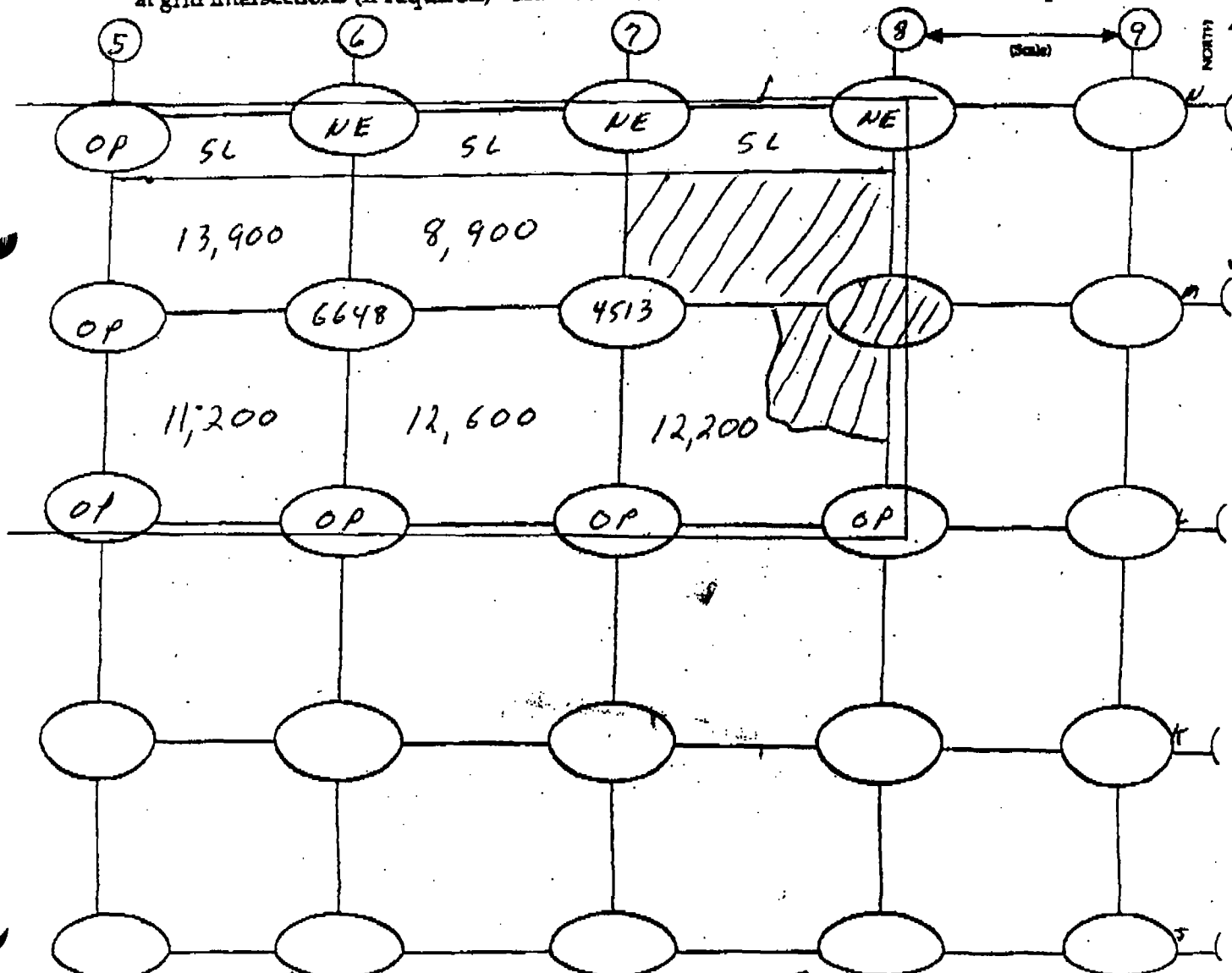
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date Grids 5-6 L-N Done / Grids 6-8 L-N Done
9-4-02 / 9-5-02Technician L.D. Smith / T. Shearn
meter # / Probe #Inst. Model Ludlum 2221Serial No. 126496 / 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 6K-9K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone Ops over pass
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 5 of 6

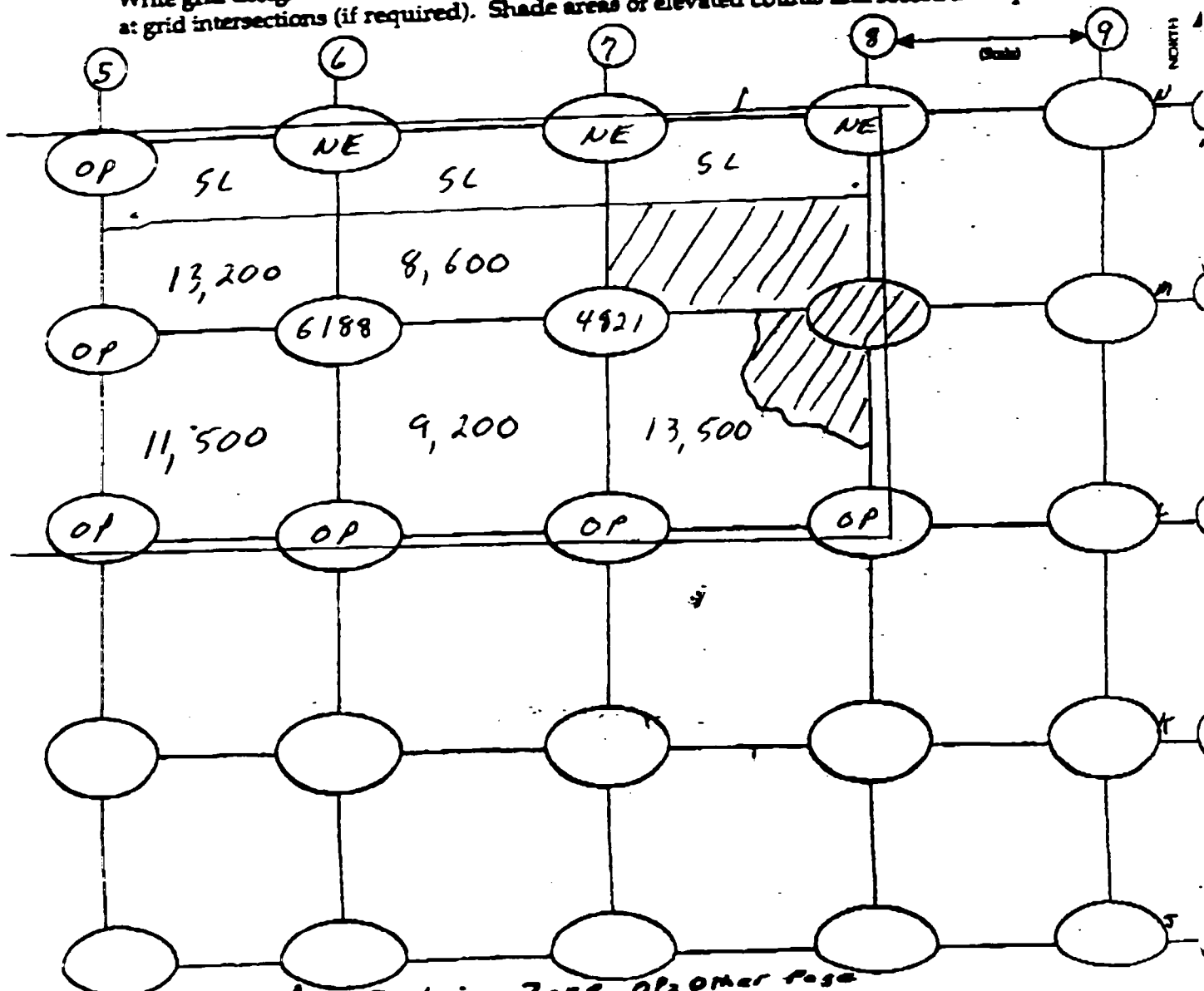
STS Consultants, Ltd.

 Date Grids 5-6 L-M Done / Grids 6-8 L-M Done
9-4-02 / 9-5-02

 Technician L.D. Smith / T. Sheehan
meter # / Probe #

 Serial No. 126496 / 168143
Inst. Model Ludlum 2221Lift Elevation -6'
 Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded
Background 6K-9K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.


 Excavated as Exclusion Zone OP: Outer Edge
 Exclusion zone boundary NE = Not excavated SL = Slope



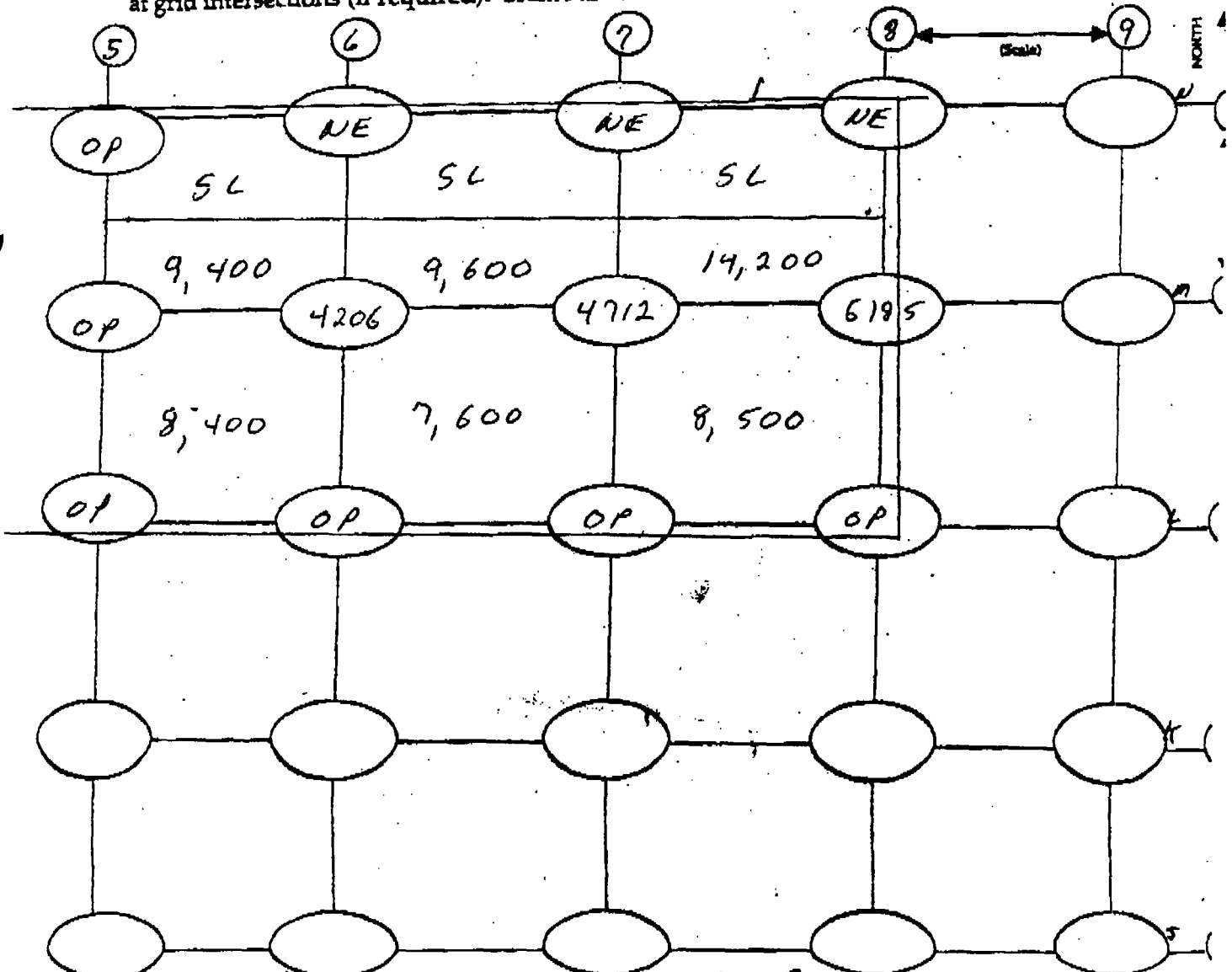
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date Grids 5-6 L-N Done / Grids 6-8 L-N Done
9-4-02 9-5-02Technician L.D. Smith / T. Sheehanmeter # Probe #
Serial No. 126496 168143Inst. Model Ludlum 2221Lift Elevation -7.5'Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded (Not Shielded)Background 6K-9K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: other page
 NE: Not excavated SL: Slope

76A4



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 2

STS Consultants, Ltd.

Date 8-26-02

Technician L D Smith
meters # Probe #

Inst. Model Ludlum 2221

Serial No. 126491 / 168143

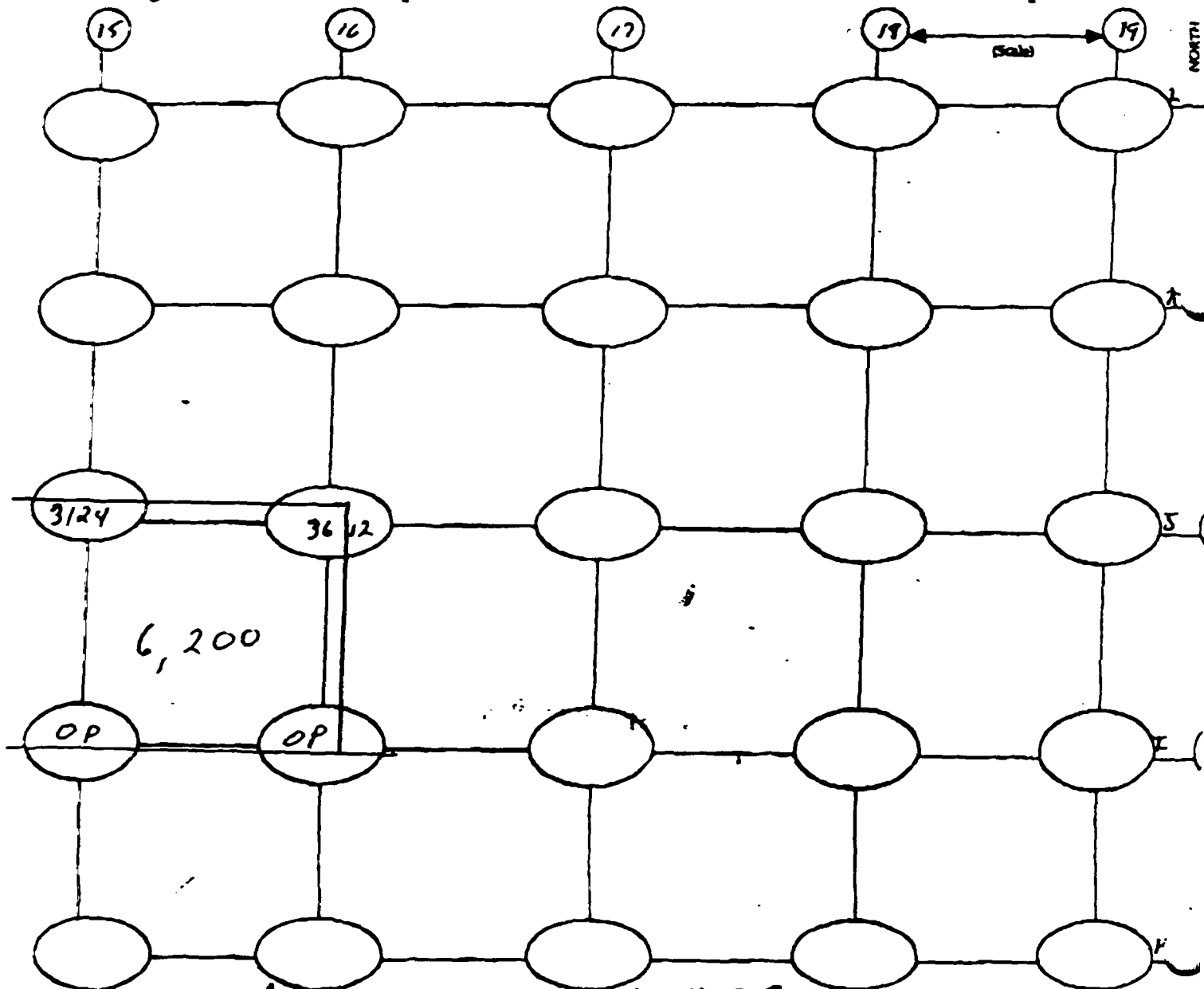
Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded

Lift Elevation Surface

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Elevated as Exclusion Zone OP: Other Page
 * - Exclusion zone boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 2

Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

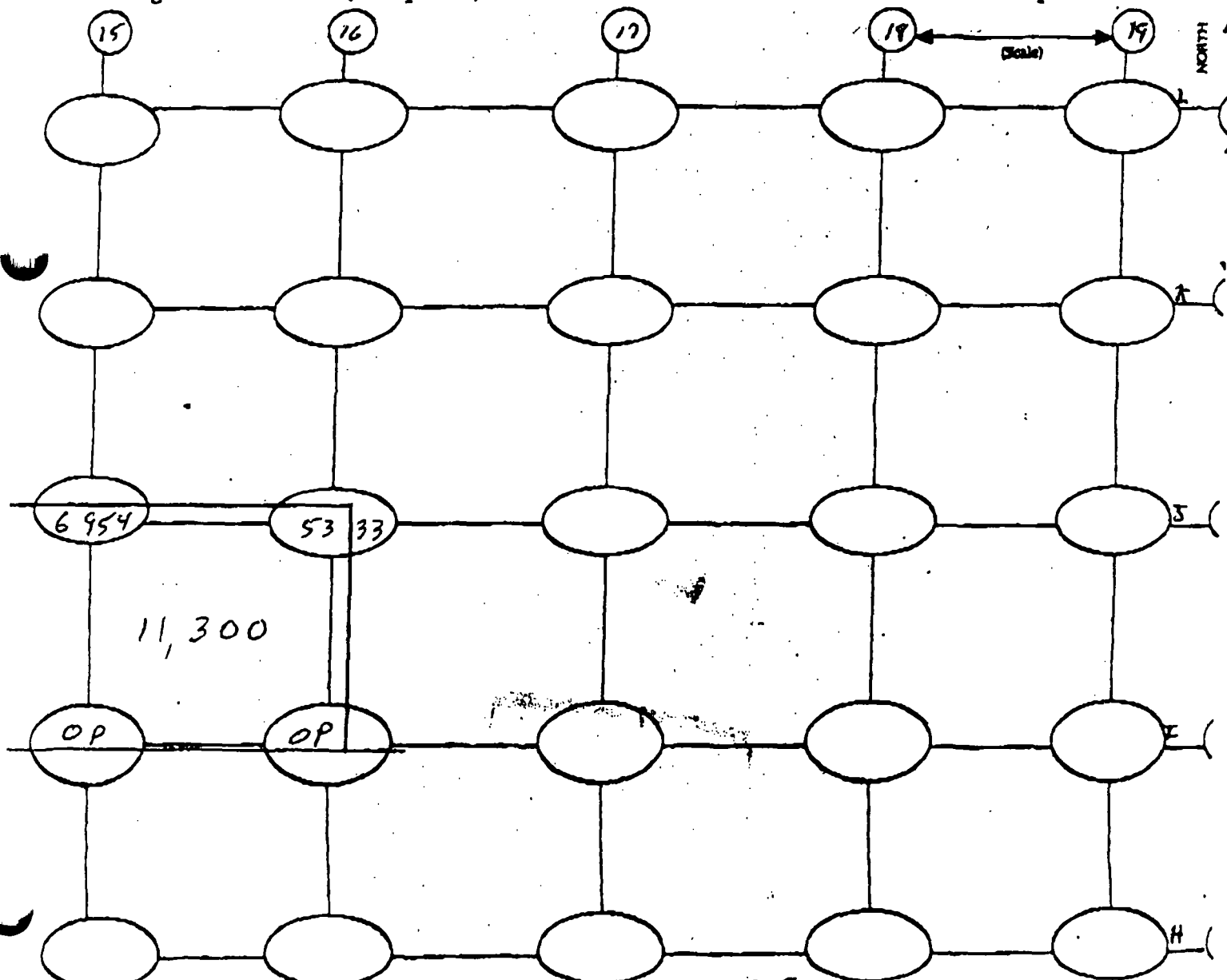
meter # 126496 Probe # 168143

Probe Type: 1"x1" NaI 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation -1.5'

Background 34-74 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other face
 = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 7

STS Consultants, Ltd.

Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 1168143

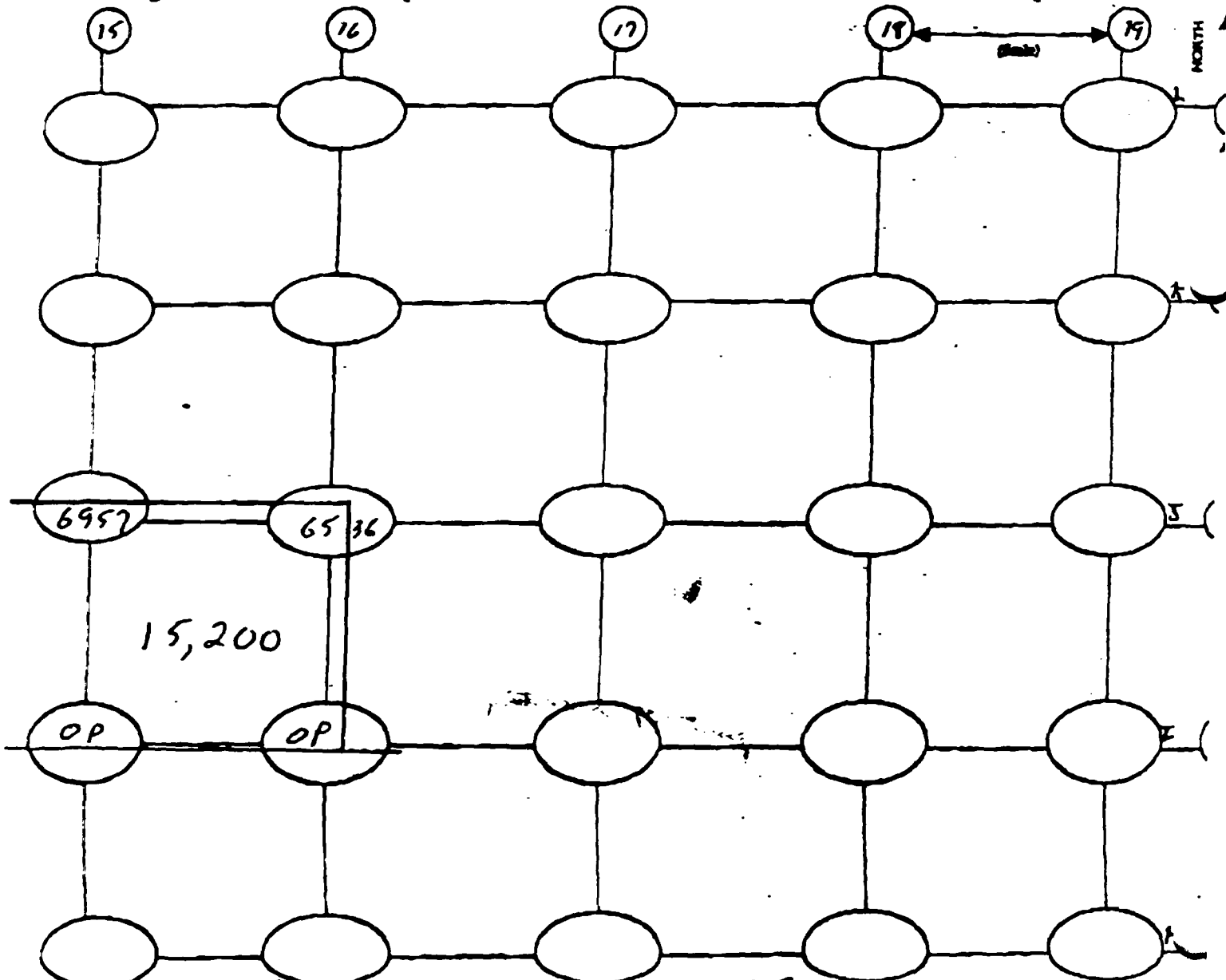
Probe Type 1"x1" NaI 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation -3'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Over Pass
SL = Slope
X = Exclusion zone boundary NE = Not excavated



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 4 of 2

Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

Serial No. 126496 / 168143

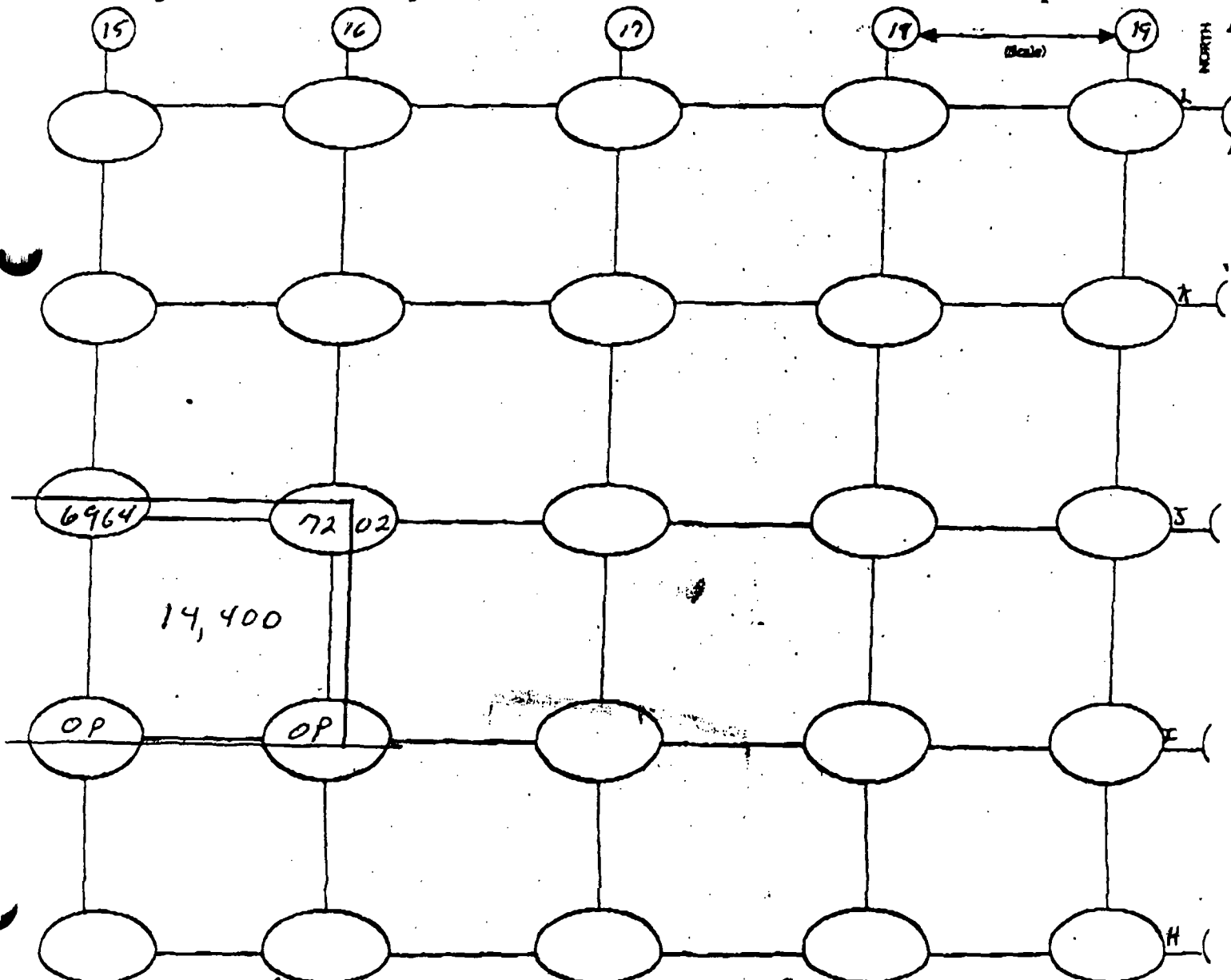
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded ☒ Not Shielded

Lift Elevation -4.5'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone 0P on map page
Exclusion zone boundary NE = Not excavated SL = Slope



STS Corporation, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 12C496 Probe # 1168143

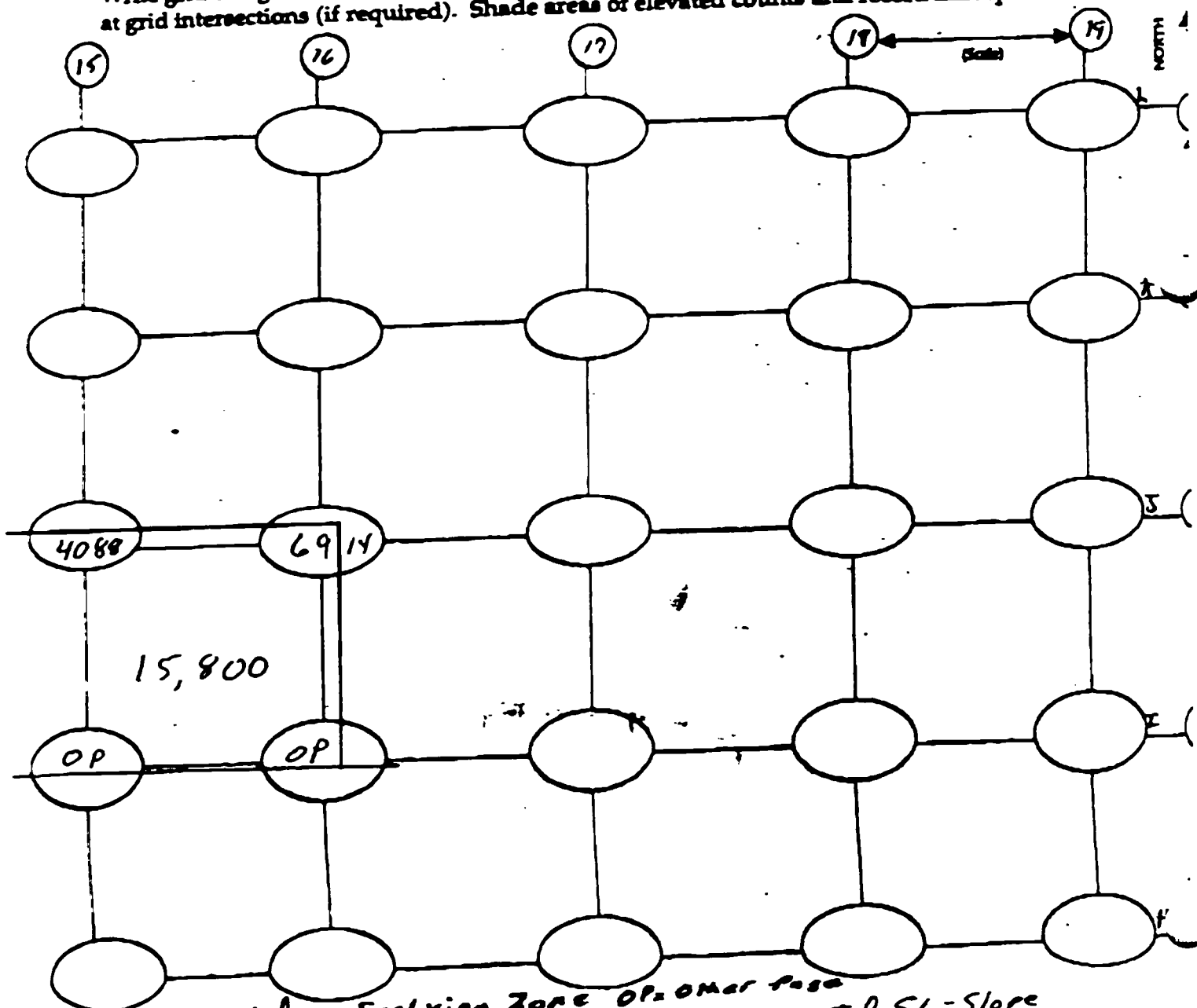
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Person
☐ Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 7

STS Consultants, Ltd.

Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

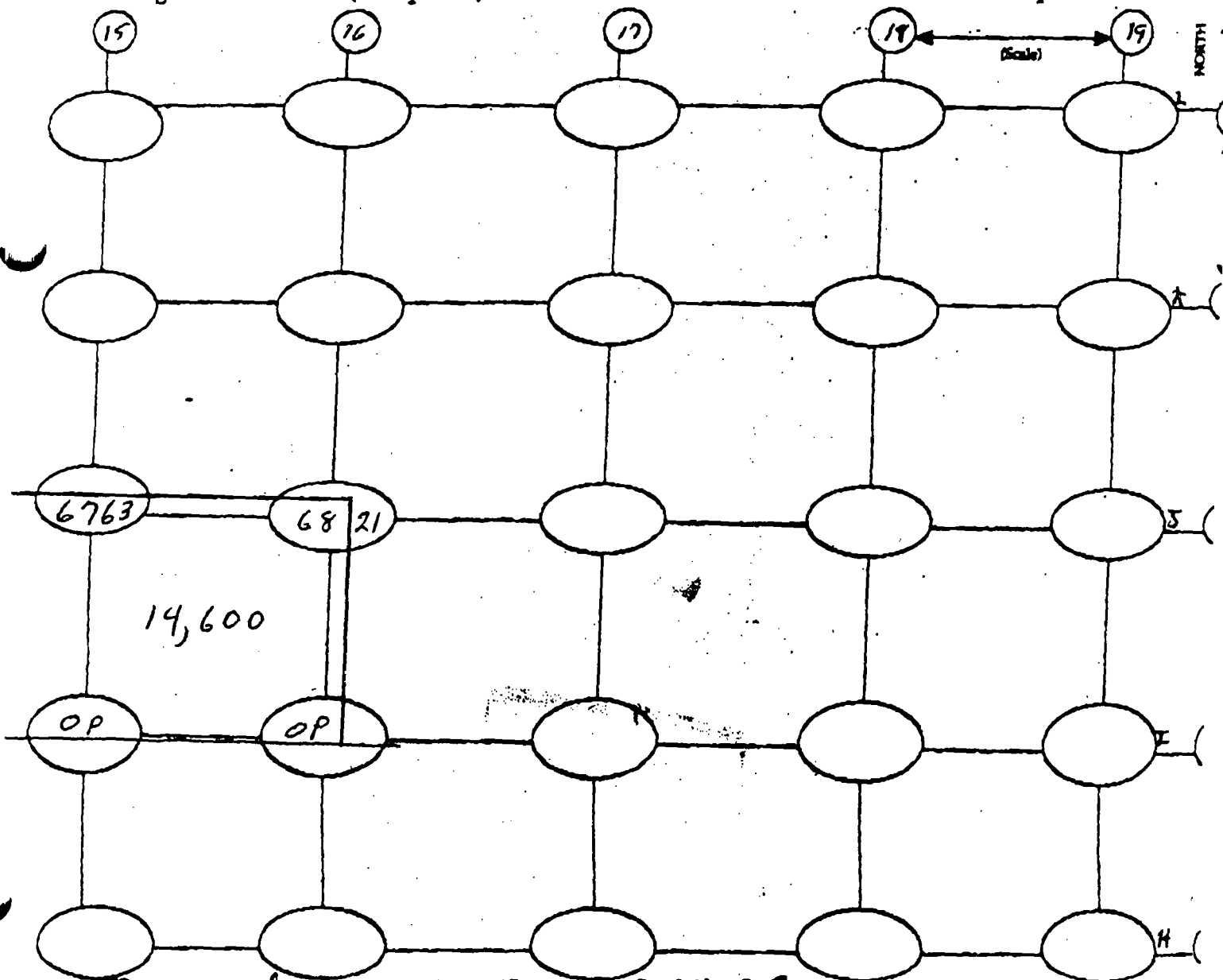
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded Not Shielded

Lift Elevation -7.5'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Other Page
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Computers, Ltd.

Project # 25585-XI

Project Name GMO

Page 7 of 7

Date 8-26-02

Technician L D Smith

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

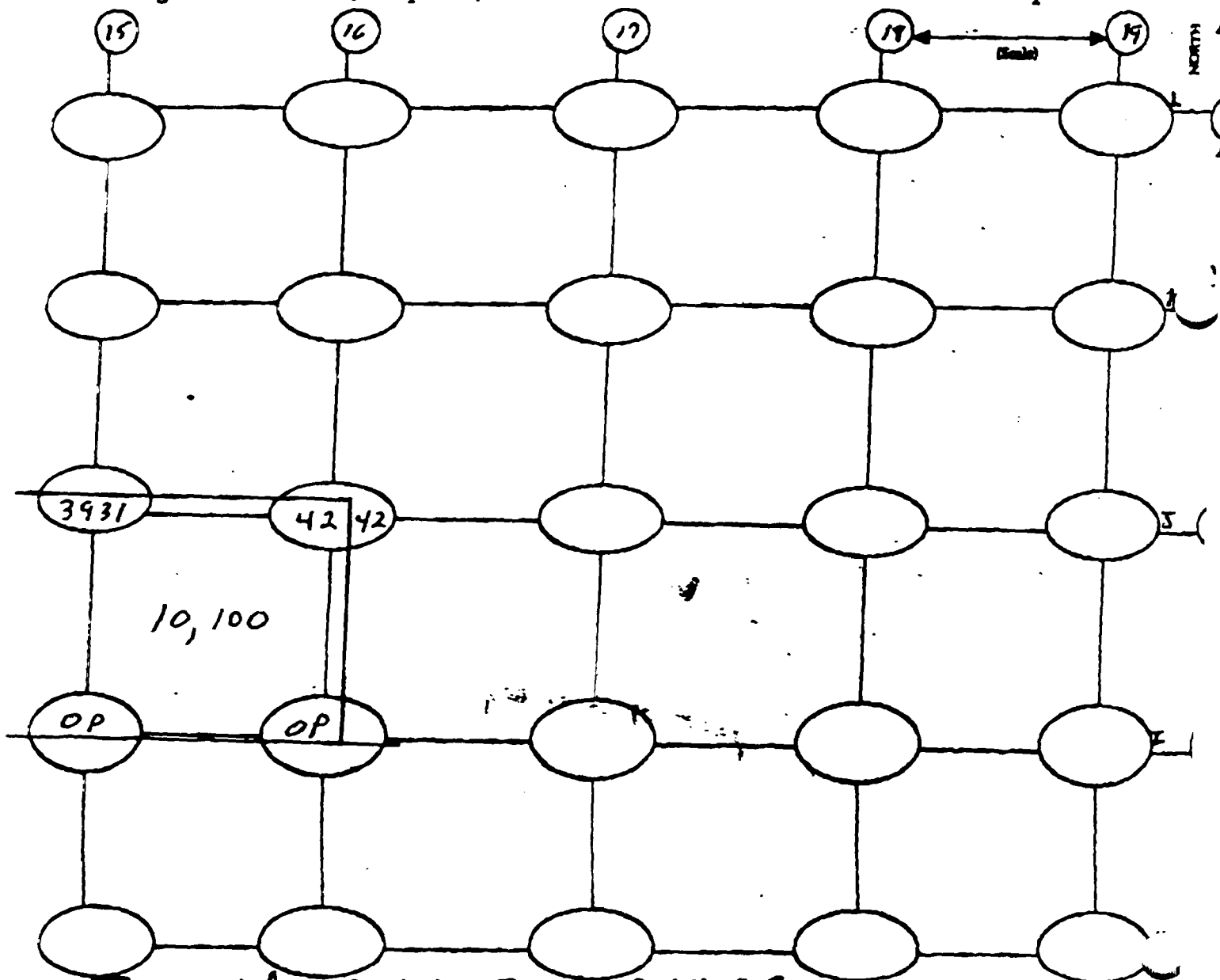
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -9'

Background 34-74 cpm

Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP, other page
Exclusion zone boundary NE = Not excluded SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

Date 8/29

Technician Toby Shewan

Inst. Model Ludlum 2221

meter # 132844 Probe # 1R168148

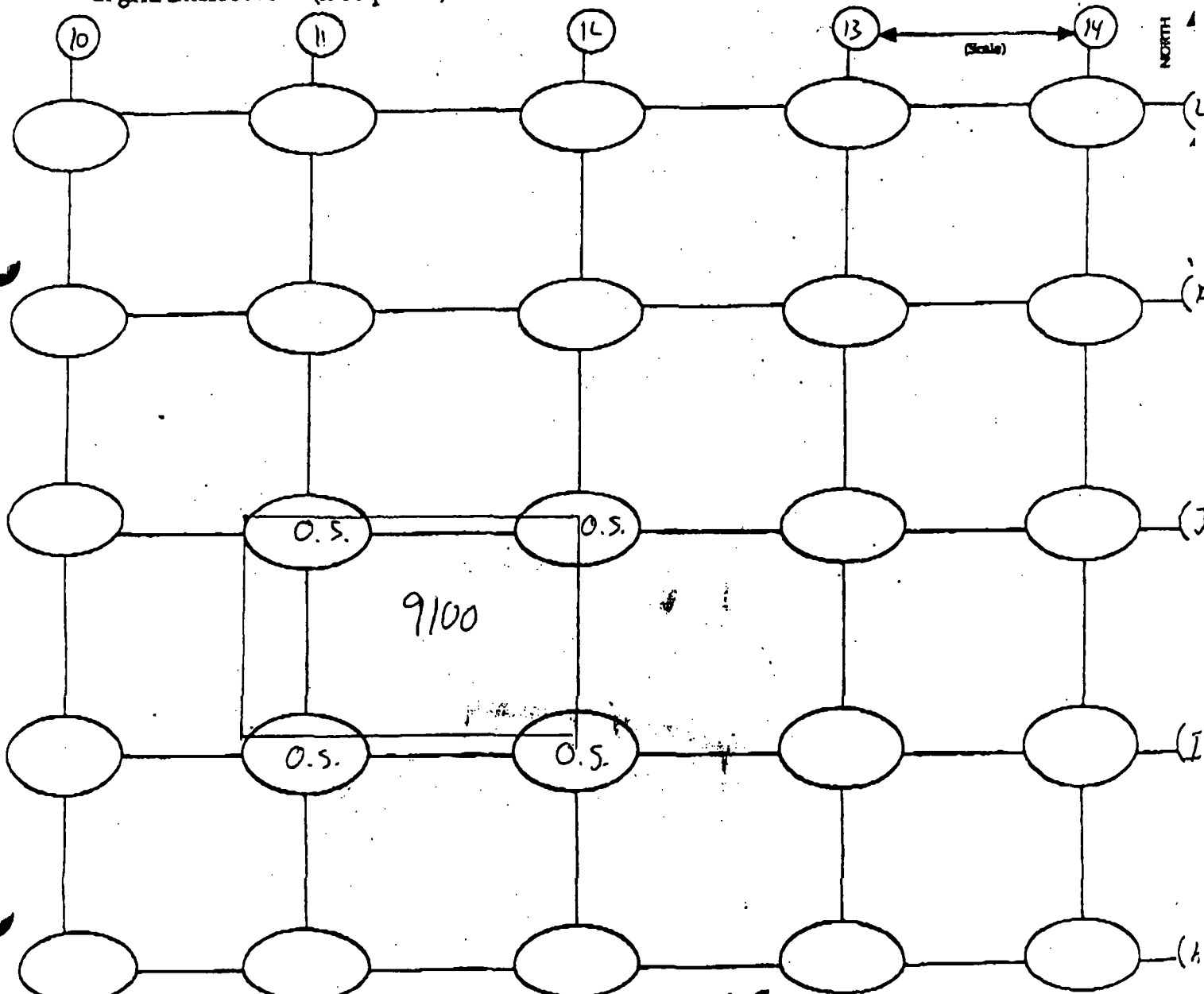
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5K - 14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OPs over pass
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants Ltd.

Date 9/29

Technician Toby Stevan

Inst. Model Ludlum 2221

meter # 132144 Probe # PAK1148

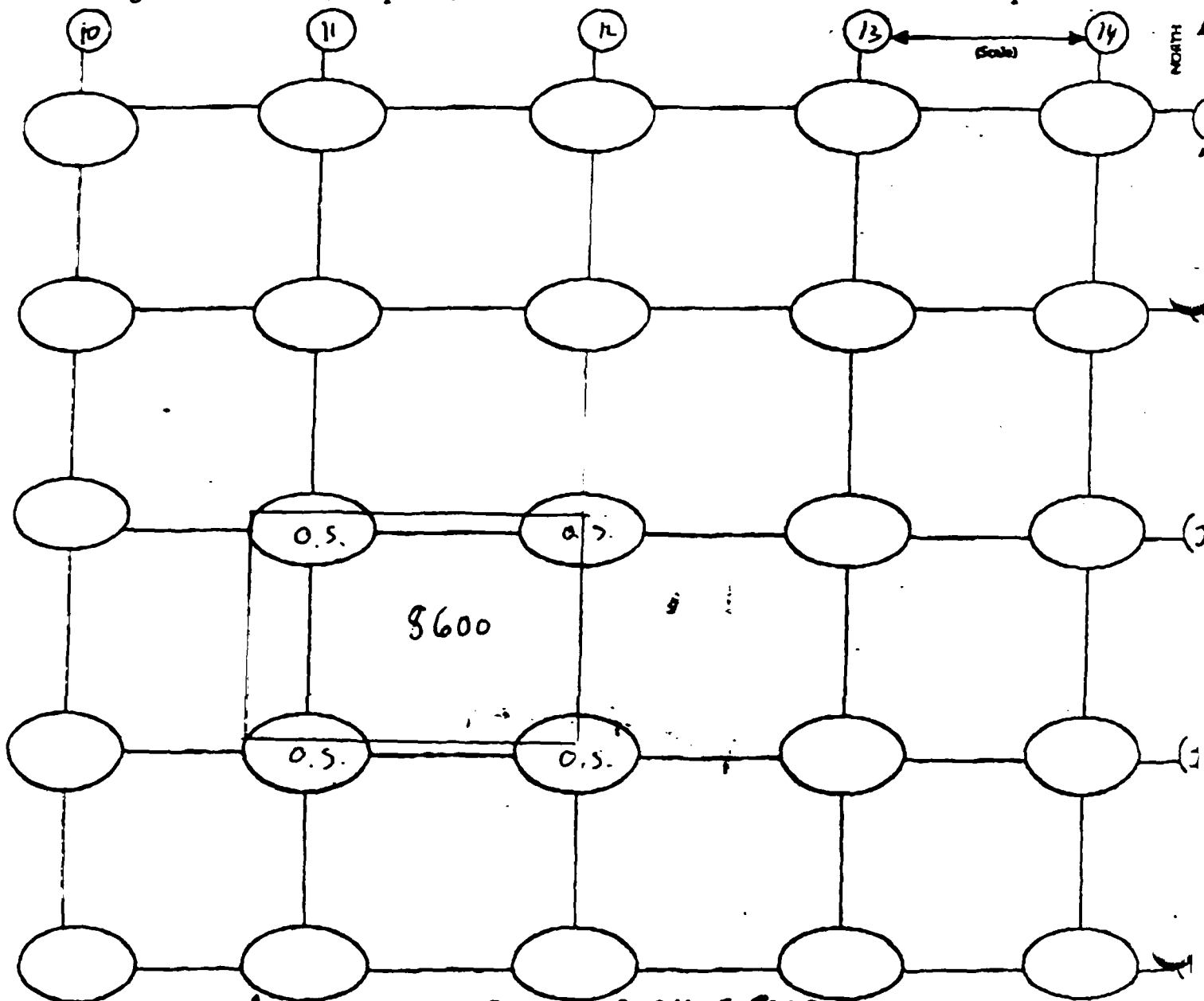
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 9K-14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone of 20 Mar 1988
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 3 of 6

Date 8/27

Technician Tob, Slawon

Inst. Model Ludlum 2221

Serial No. 132844 Probe # PK168198

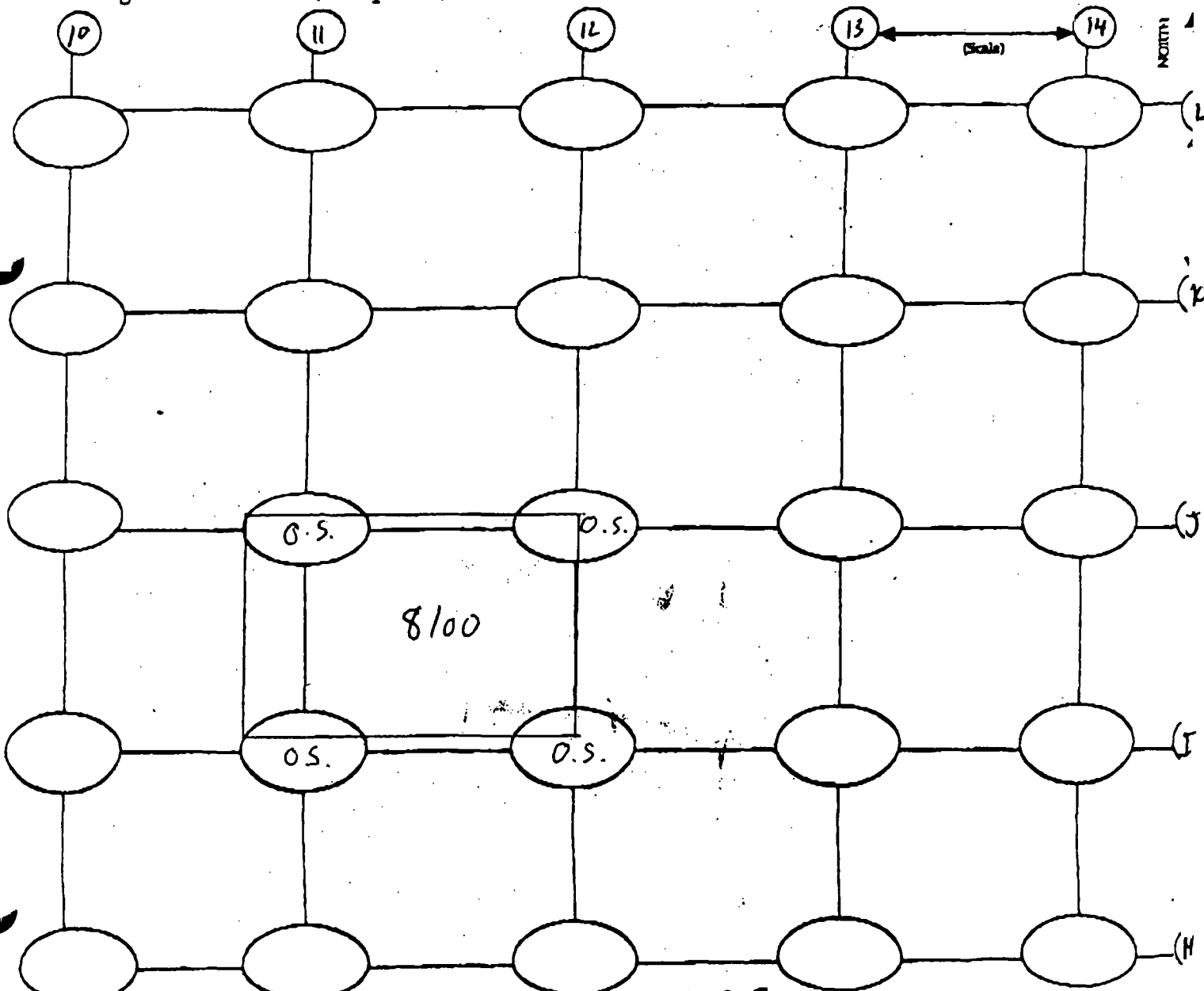
Probe Type: 1"x1"NaI / 2"x2" NaI
Shielded / Not Shielded


Lift Elevation -3'

Background 8K - 14K unshielded cpm

Action Level 20709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OR other use
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 4 of 6

STS Consultants, Ltd.

Date 8/29

Technician Toby Shewer

Inst. Model Ludlum 2221

meter # 132844 Probe # PAK9148

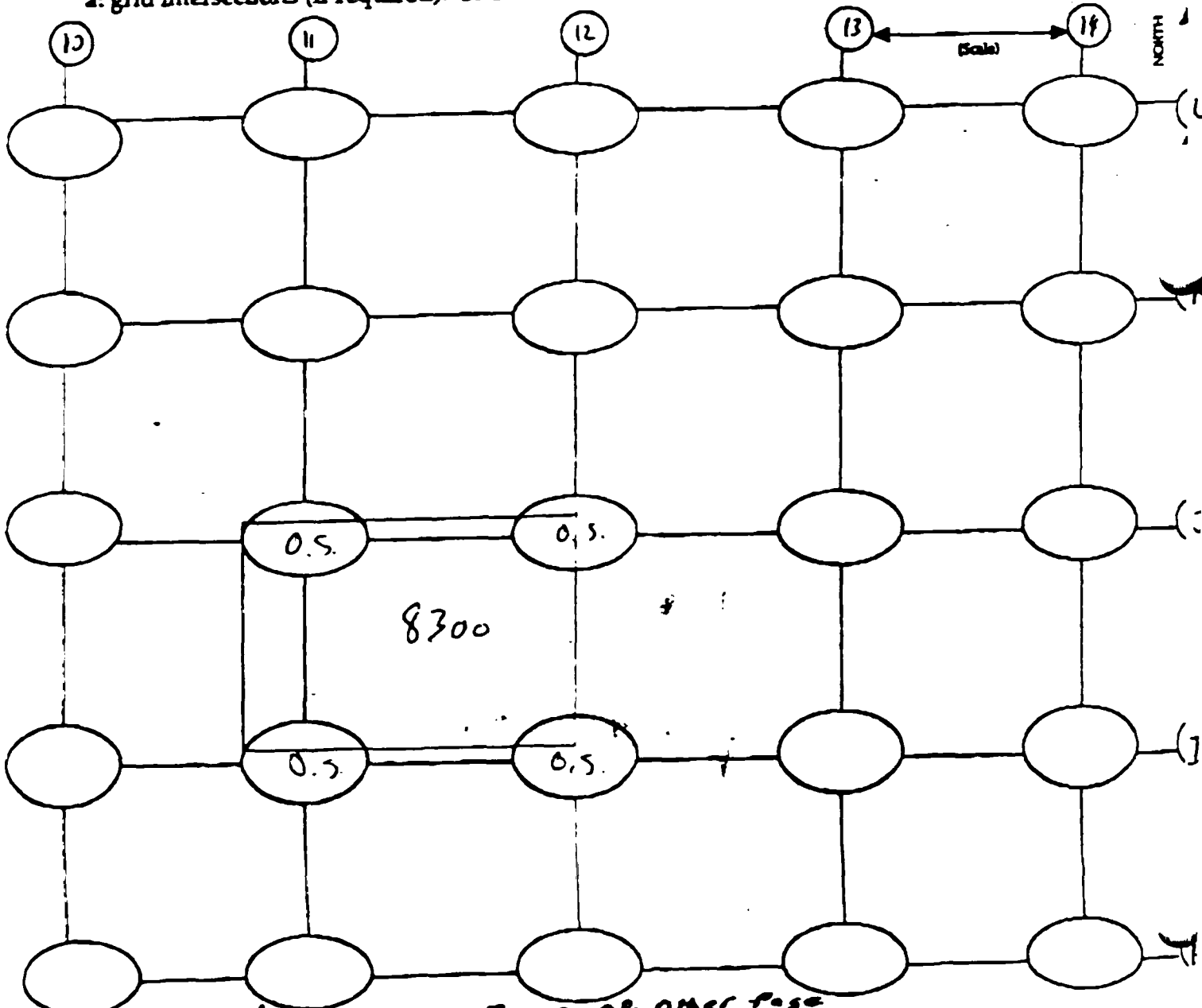
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded


Lift Elevation -4.5

Background 8k-14k unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone OPZ Over Pass
- - - - - Exclusion Zone Boundary NE = Not excavated SL = Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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Date 8/29

Technician Toby Stewart

Inst. Model Ludlum 2221

Serial No. 131944 PR168148

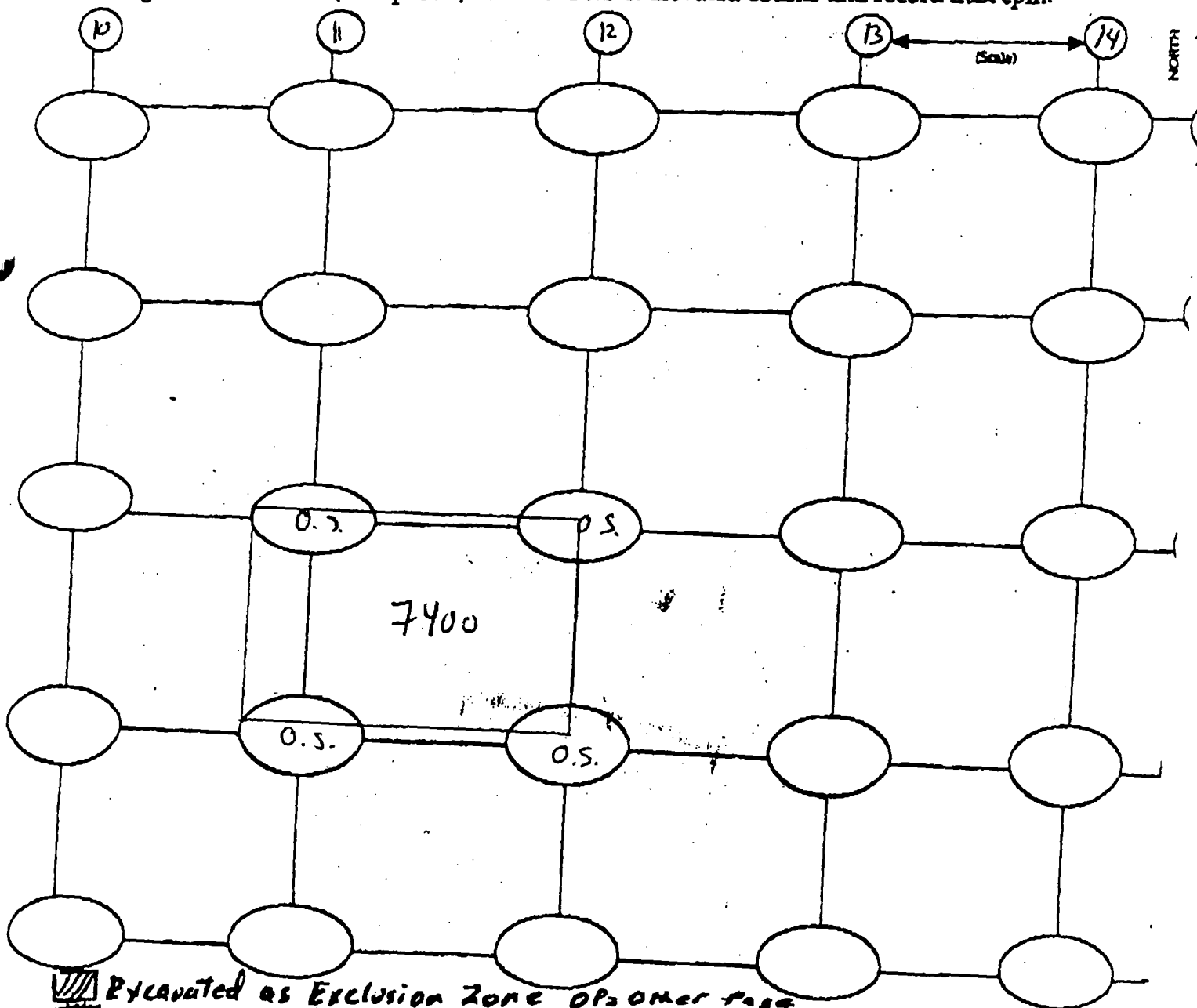
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -C'

Background 8K-14K unshielded cpm

Action Level 20909 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 6 of 6

Date 8/29

Technician Toby Slayton
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 132994 PRK848

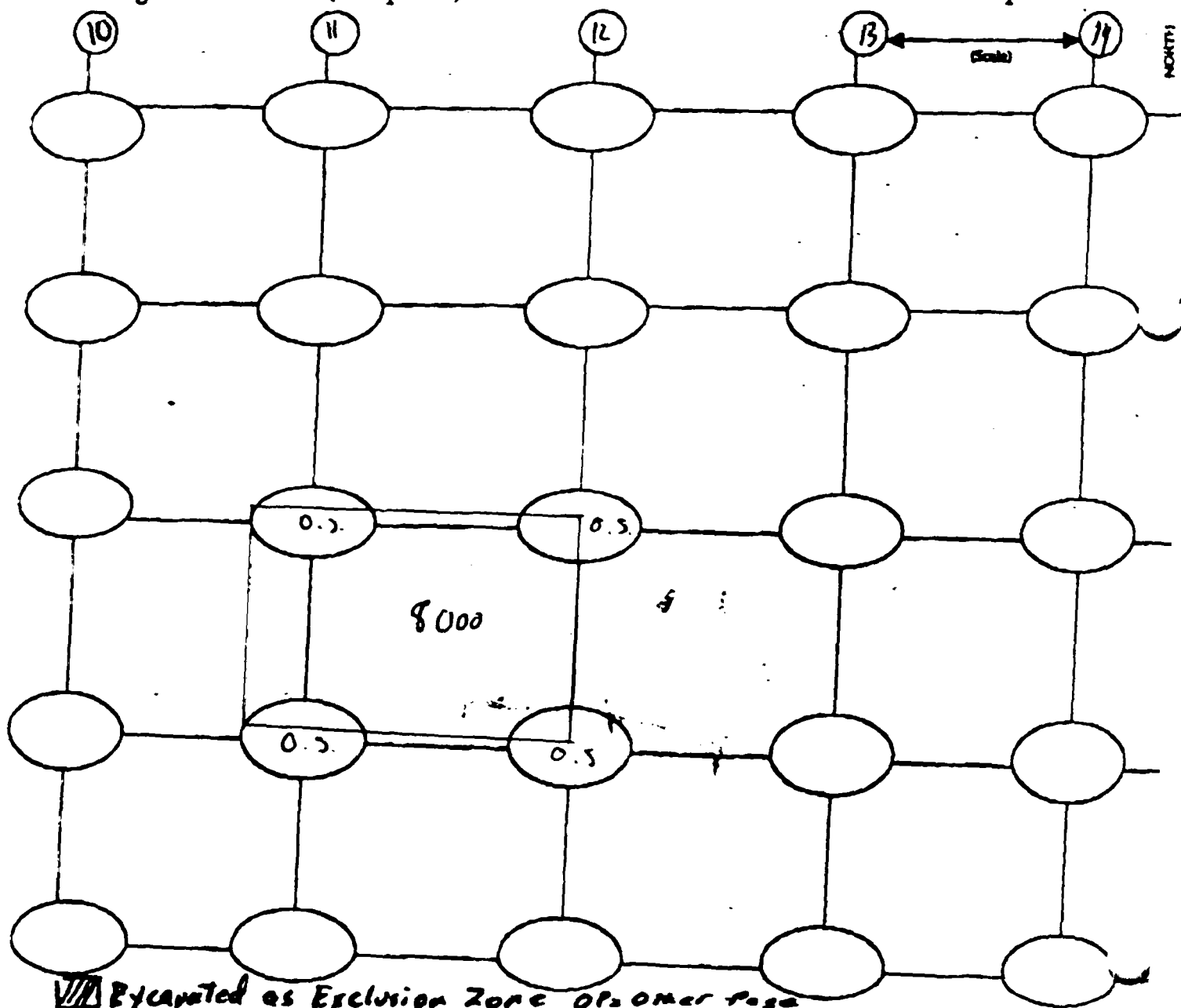
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 8K - 14K unshielded cpm

Action Level 20709 unshielded cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone Operator's Page
- Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/11/02 / 9/12/02 / 9/13/02

Technician Jerry Krause / Lindsay Aschman
meter # Probe #

Inst. Model Ludlum 2221

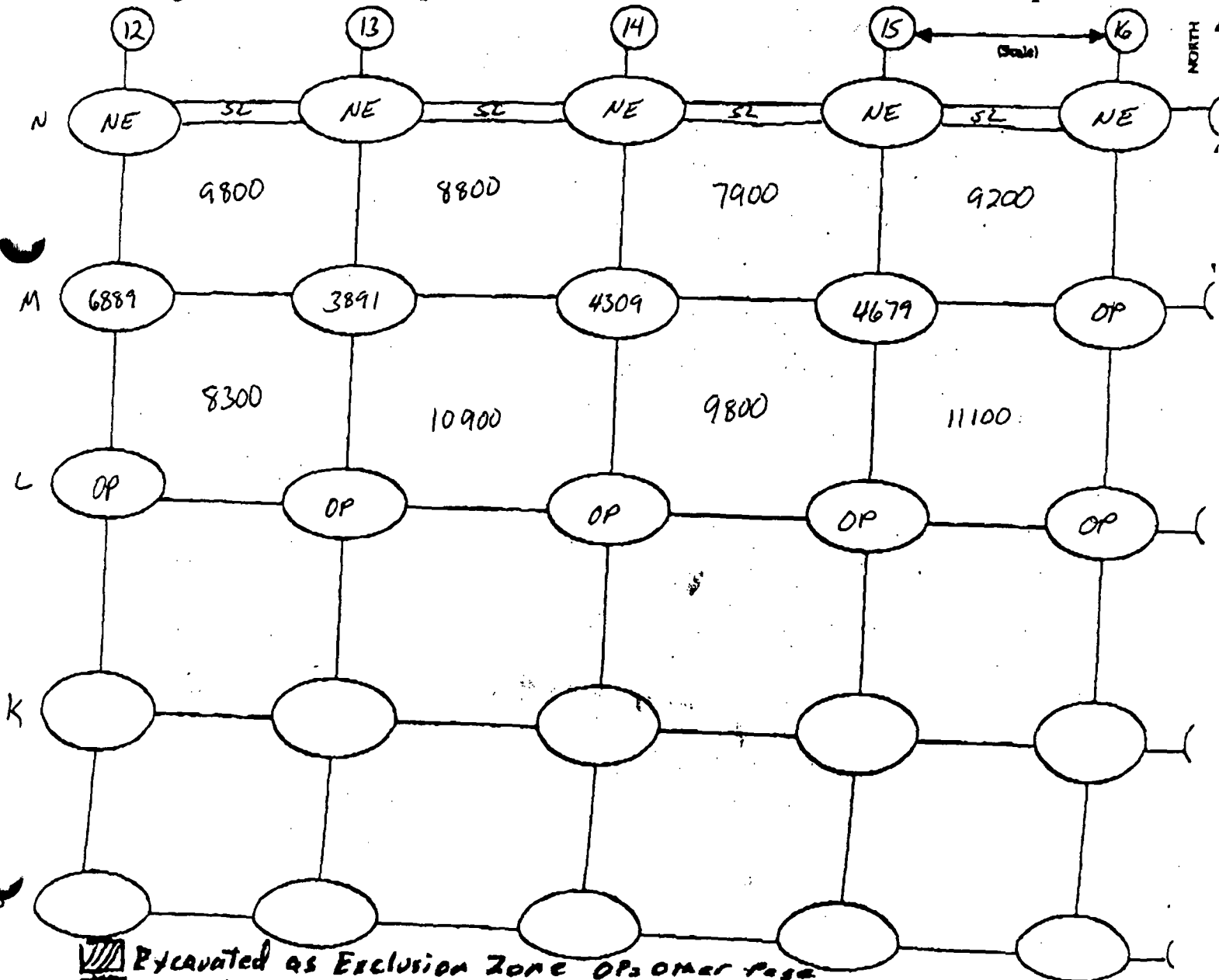
Serial No. 132844 168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 4k - 6k cpm Action Level 20,909 US cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 4/11/02 / 9/12/02 / 9/13/02

Technician Jerry Kane / Lindsay Asch
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 132844 168143

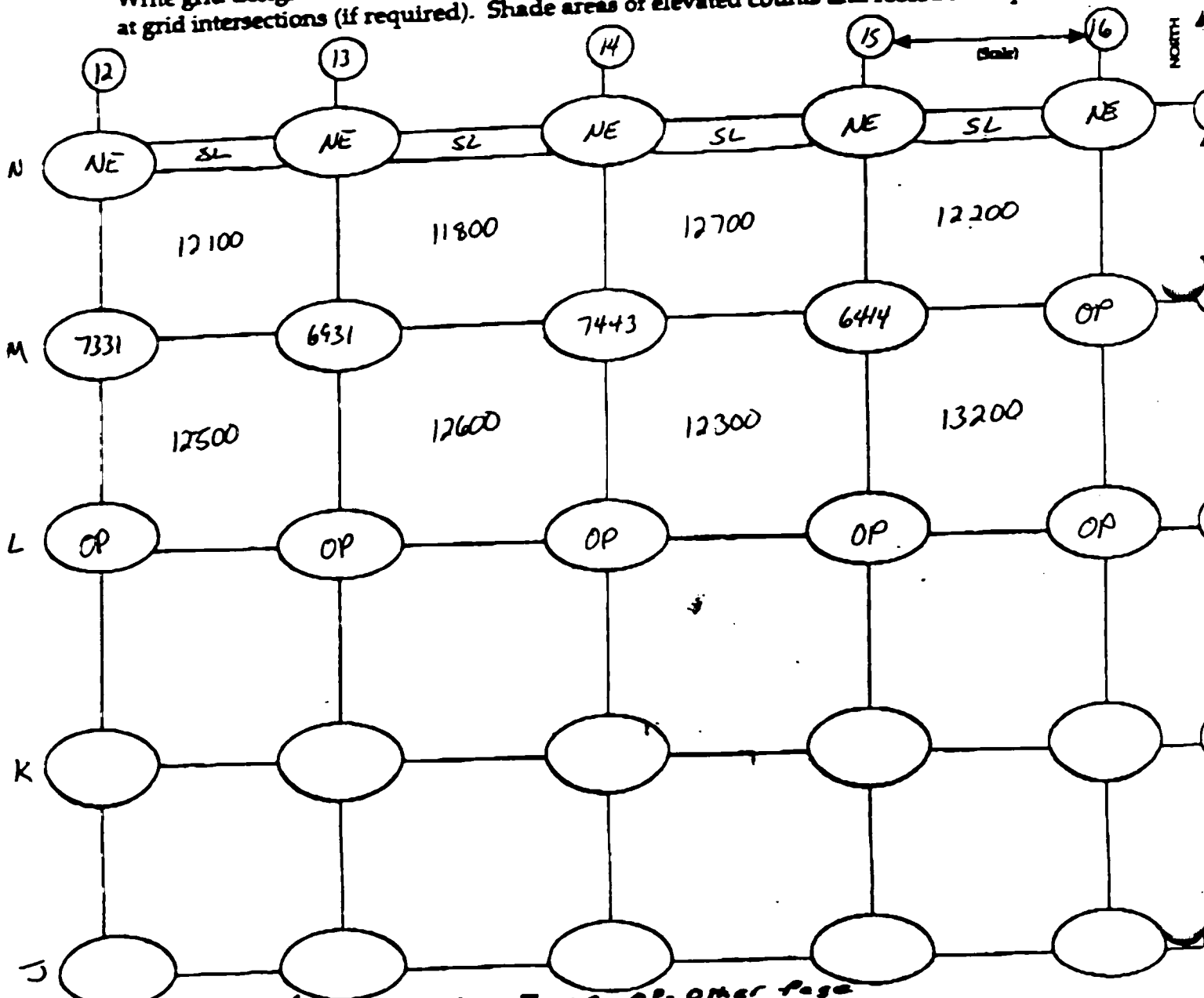
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5 ft.

Background 4K - 6K cpm

Action Level 20,909 /us cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 3 of 6

Date 9/11/02 / 9/12/02 / 9/13/02

Technician Serry Krave / Lindsey Aschman

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

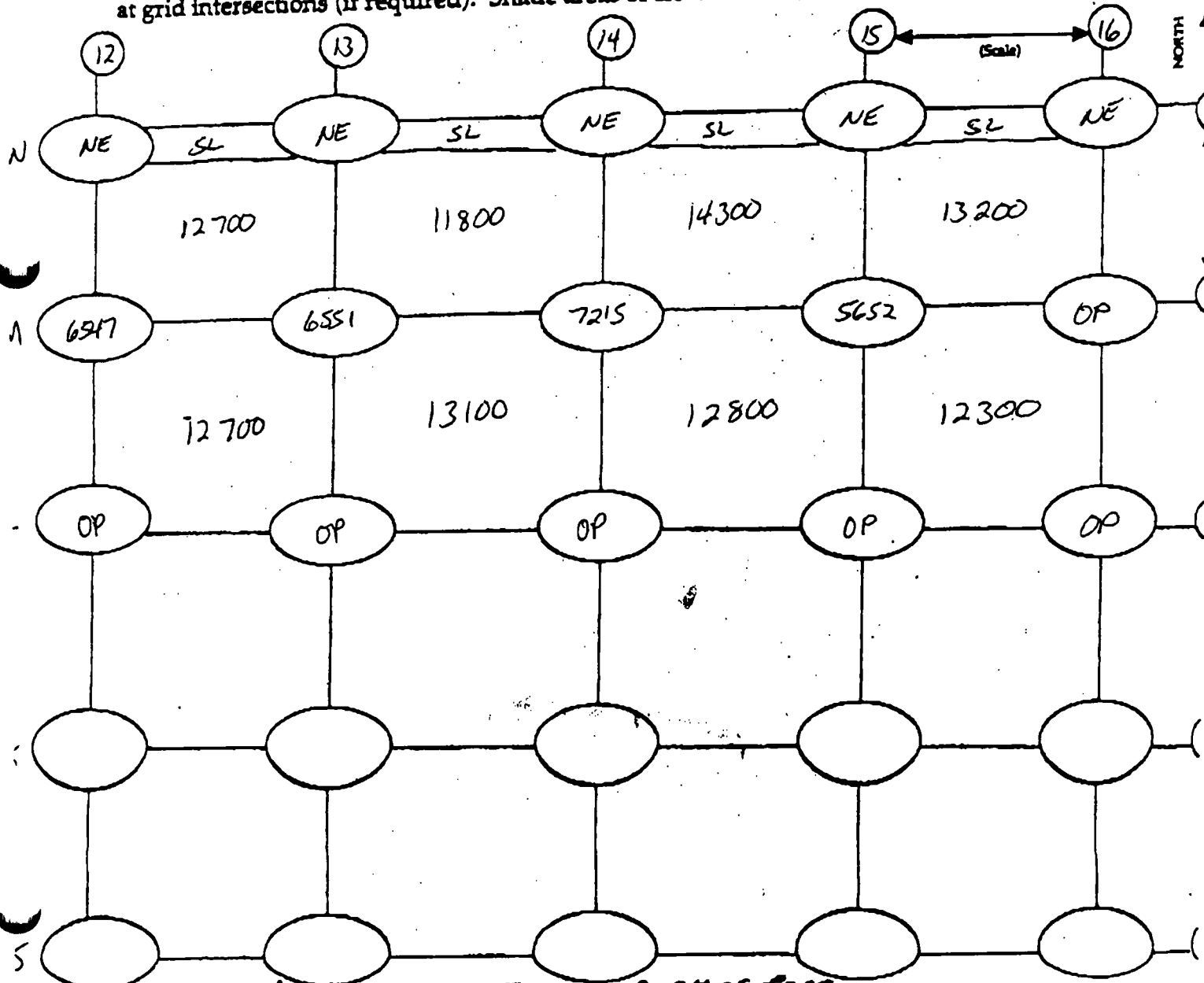
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3.0 ft.

Background 4K - 6K cpm

Action Level 20,909 [us] cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other phase
*** = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 4 of 6

STS Consultants, Ltd.

Date

9/11/02 / 9/12/02 / 9/13/02

Technician

Jerry Krue / Lindsay Ardell

Inst. Model

Ludlum 2221

Serial No.

meter # 132844
Probe # 169148

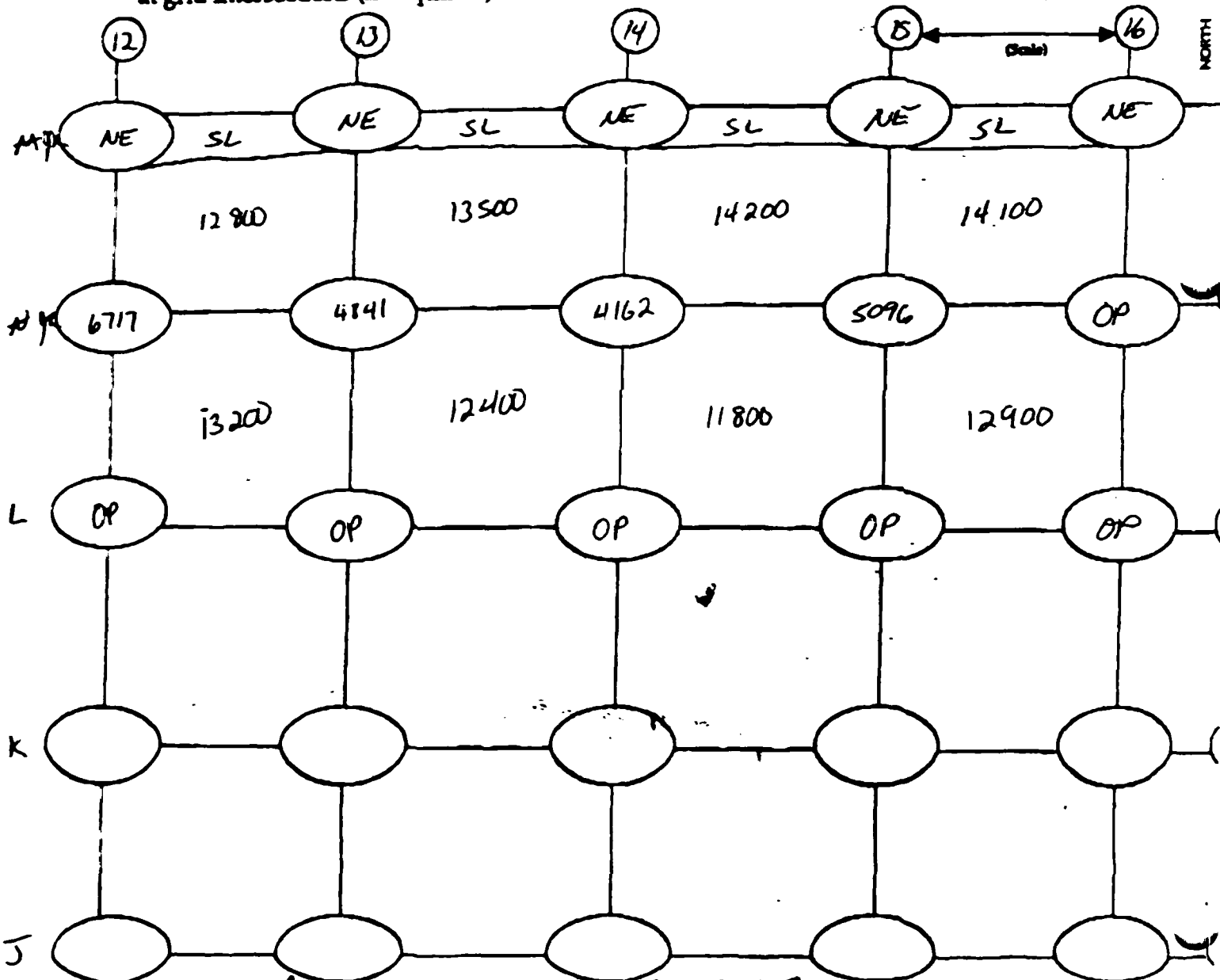
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5 ft.

Background 4K-6K cpm

Action Level 20,909 [US] cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone (Shaded Area)
X = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/11/02 / 9/12/02 / 9/13/02

Technician Jerry Krane / Lindsay Askin
meter # Probe #

Inst. Model Ludlum 2221

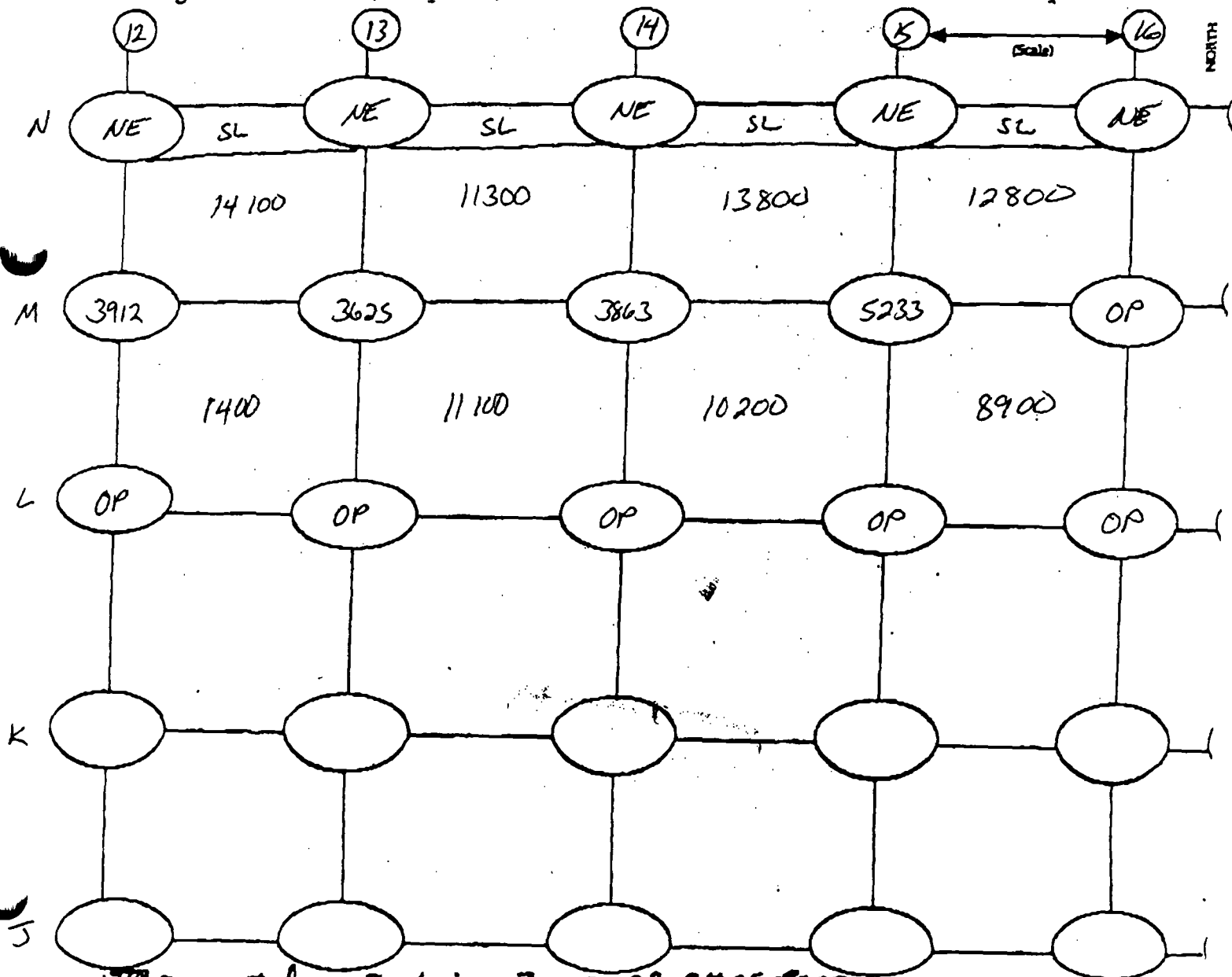
Serial No. _____

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6.0 ft.

Background 4K - 6K cpm Action Level 20,909 μ s cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
*** = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/11/02 / 9/12/02 / 9/13/02

Technician Serg Krane / Lindsey Aschman
meter # Probe #

Inst. Model Ludlum 2221

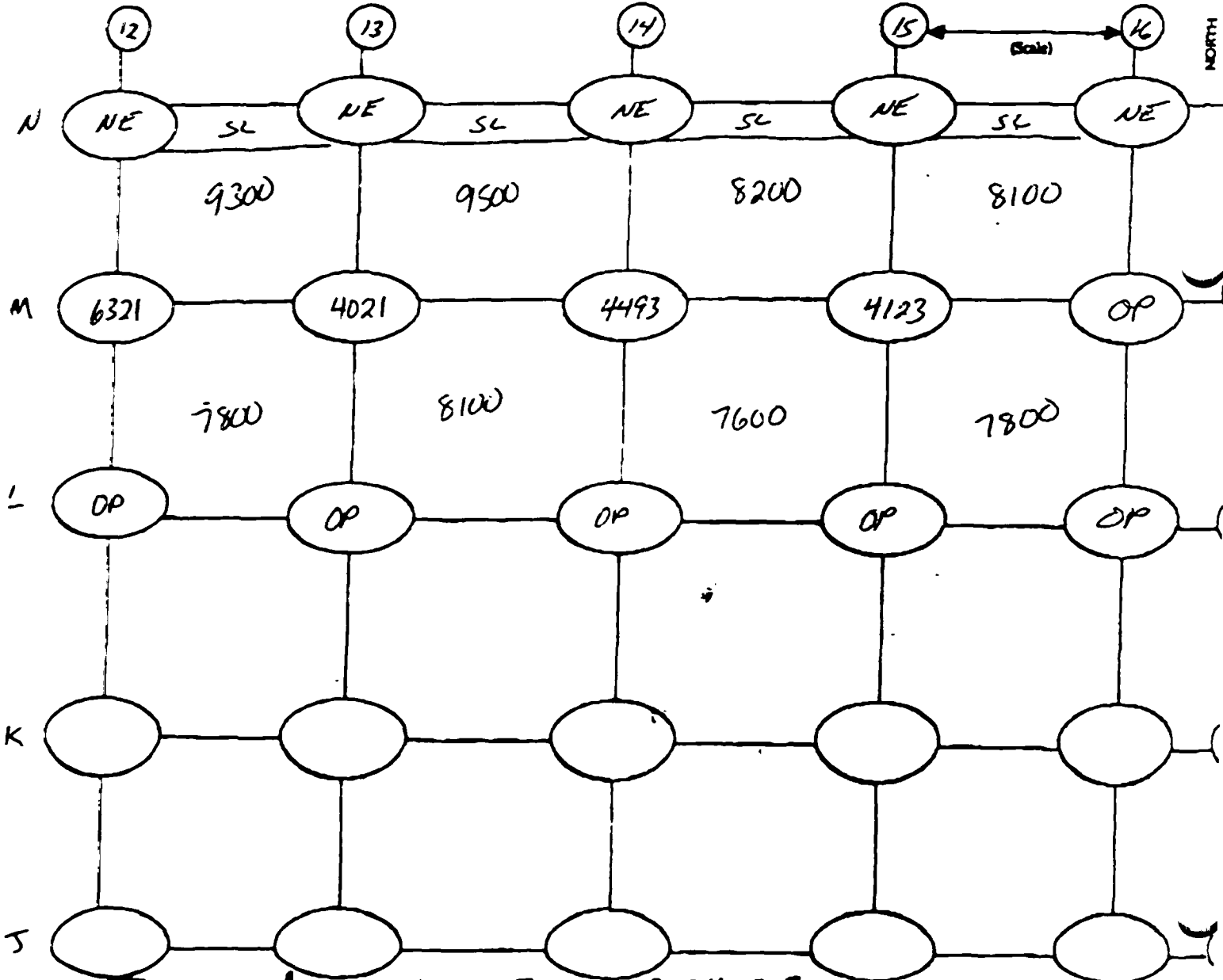
Serial No. 152844 168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 7.5 ft

Background 4k - 6k cpm Action Level 20,909 / US cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: other flag
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 9/6 - 9/10

Technician Lindsay Aschum

Inst. Model Ludlum 2221

Serial No. 126496 / 1168143

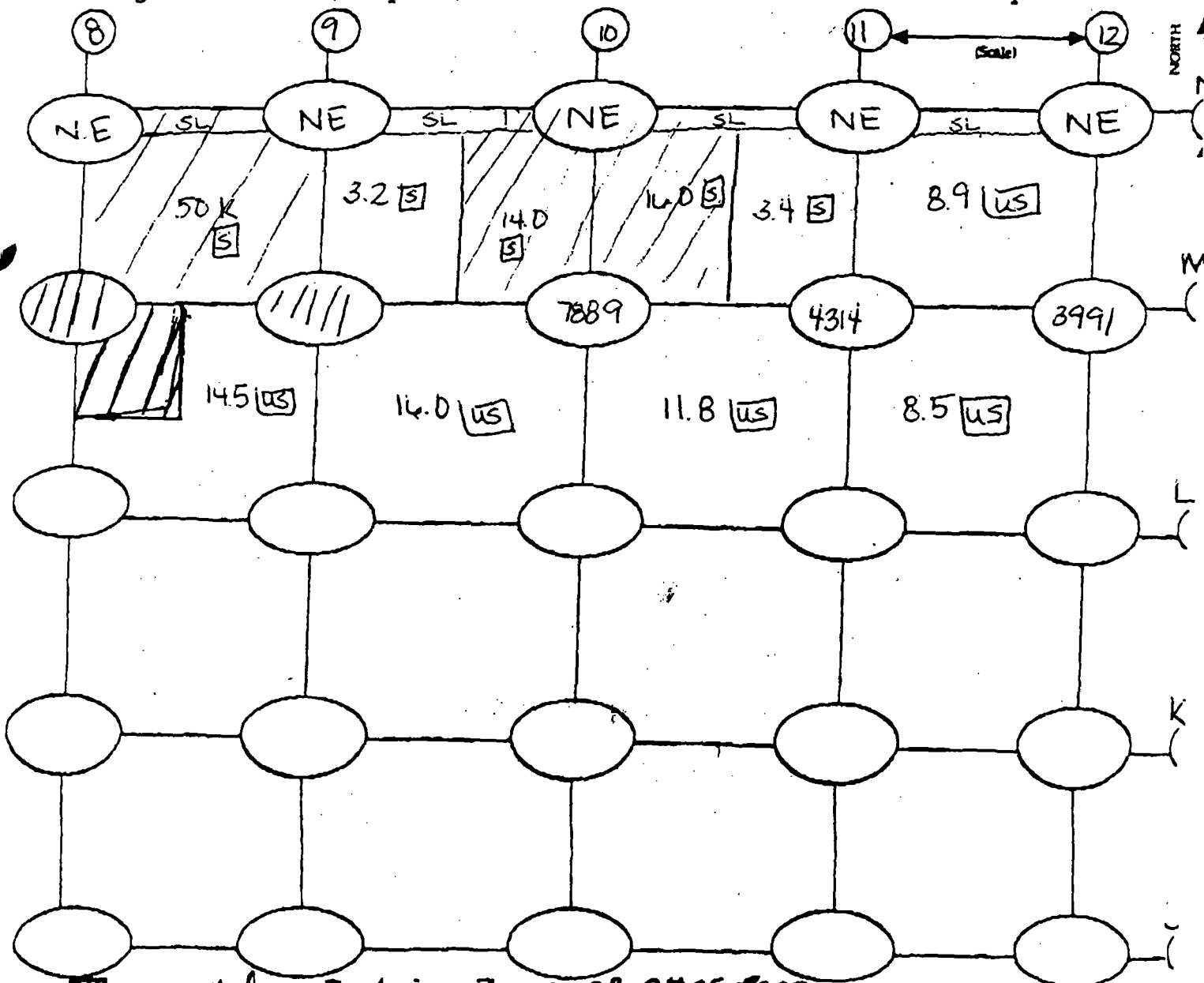
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -MMA surface

Background 4-16K cpm

Action Level 20,1680 / 16988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone per Omer Page
exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants Ltd.

Date 9/6-9/10

Technician Lindsay Aschm / Jemy
meter # Probe #

Inst. Model Ludlum 2221

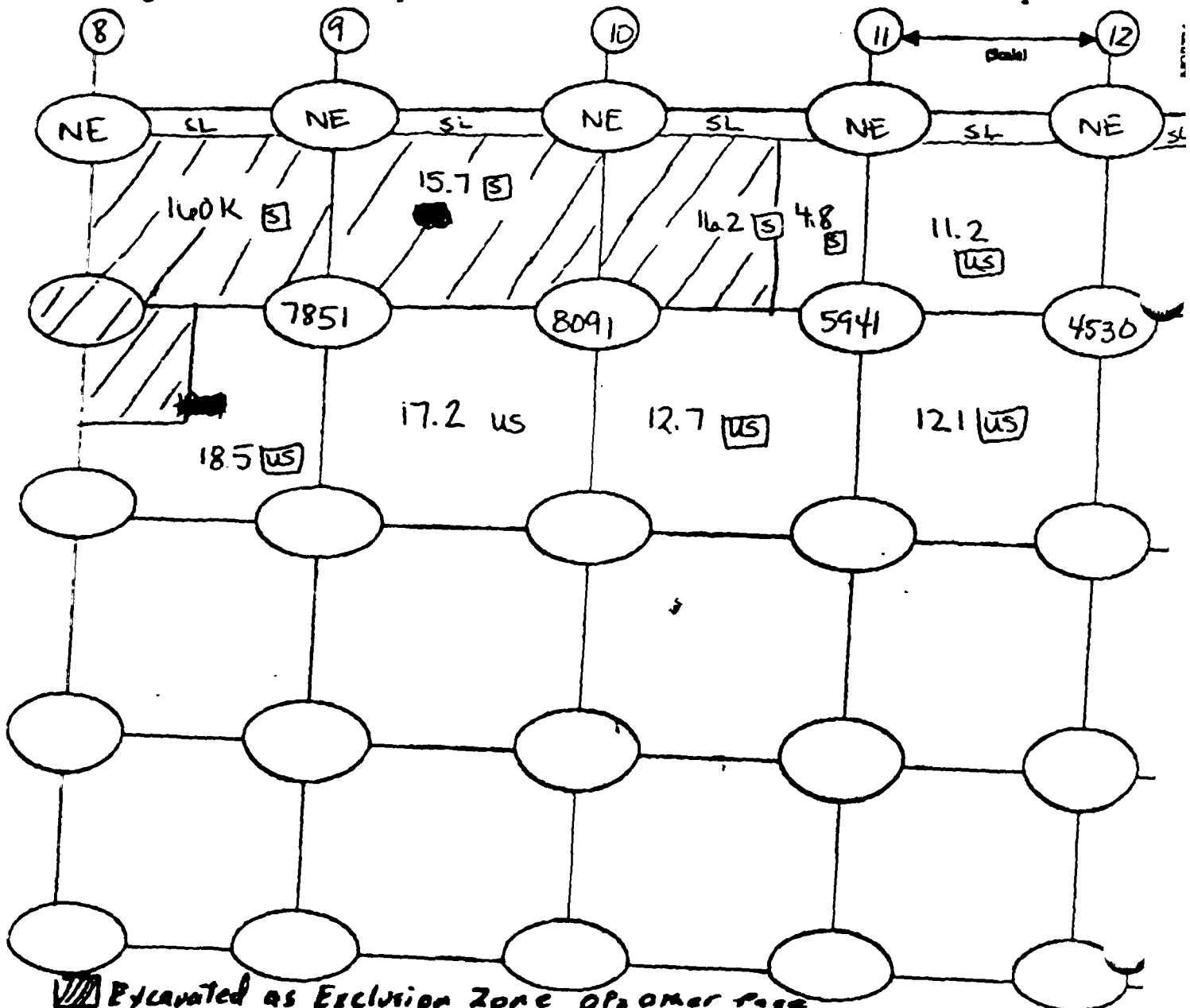
Serial No. 126496 / 168143

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -15

Background 4.6k cpm Action Level 20680 / 12988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 3 of 6

Date 9/16/02 - 9/10/02

Technician L. Aschim / J. Krane

Inst. Model Ludlum 2221

meter # 126496 Probe # 168143

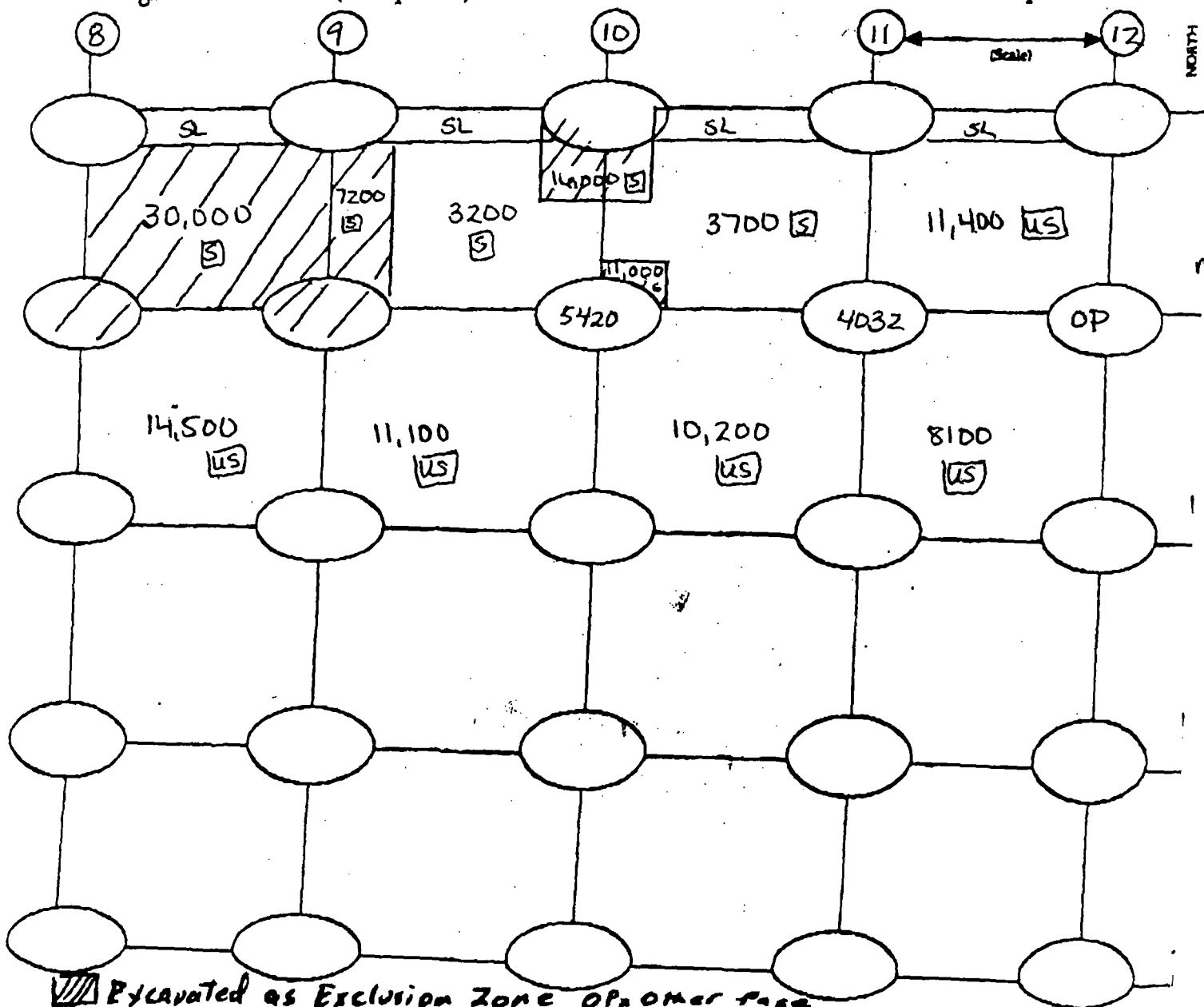
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3

Background 4-6 K cpm

Action Level 20680 / 6988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, other page
 ** - Exclusion zone boundary NE = Not excavated SL = Slope

RADIATION SURVEY FORM



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

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STS Consultants, Ltd.

Date 9/6/02 - 9/10/02

Technician L. Aschim / J. Krane

Inst. Model Ludlum 2221

meter # Probe #

Serial No. 126496 / 168143

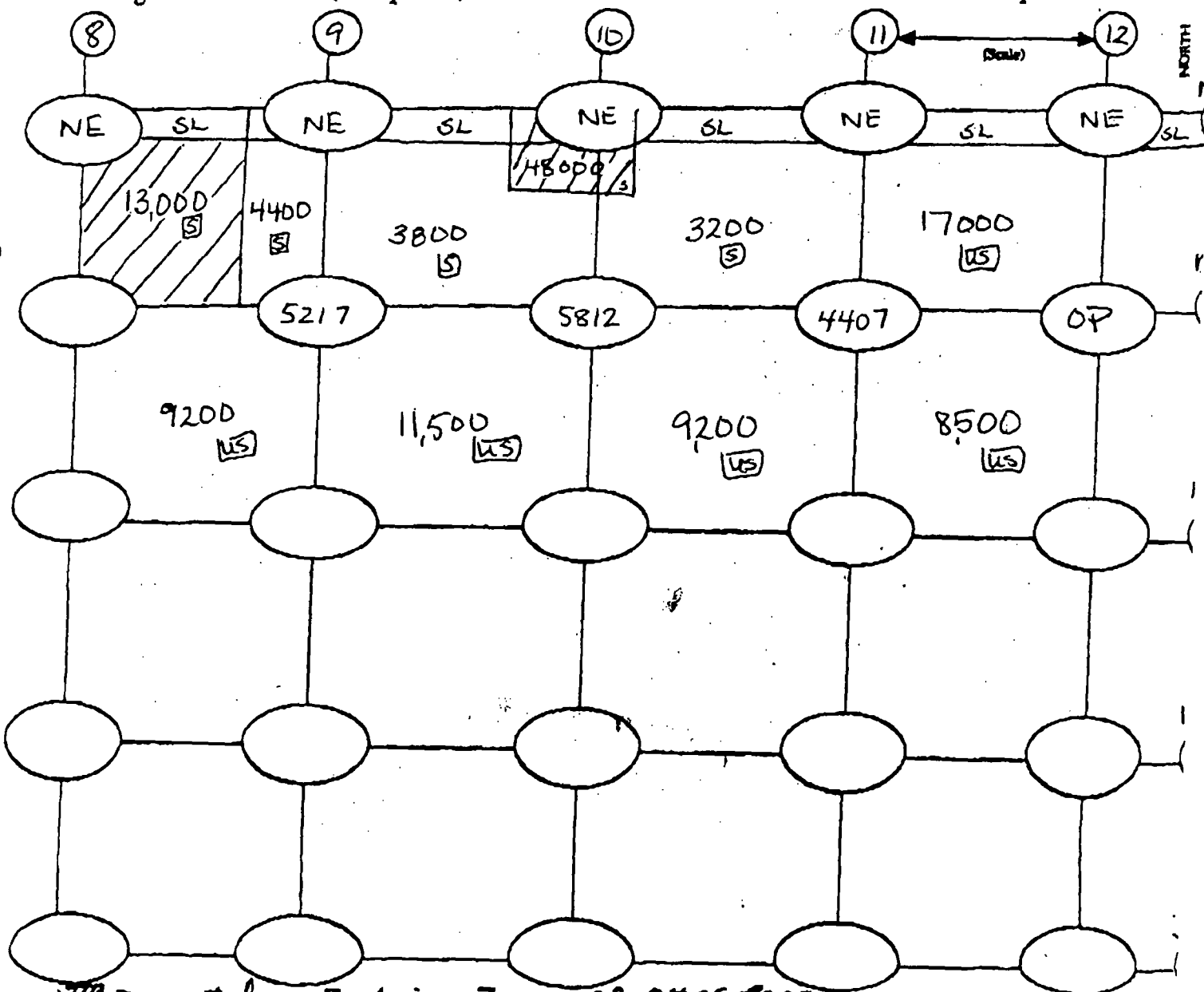
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6.0

Background 4-6K cpm

Action Level 20680 / 6988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
* = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/6/02 - 9/10/02

Technician L. Aschim / J. Kranz
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 126496 168143

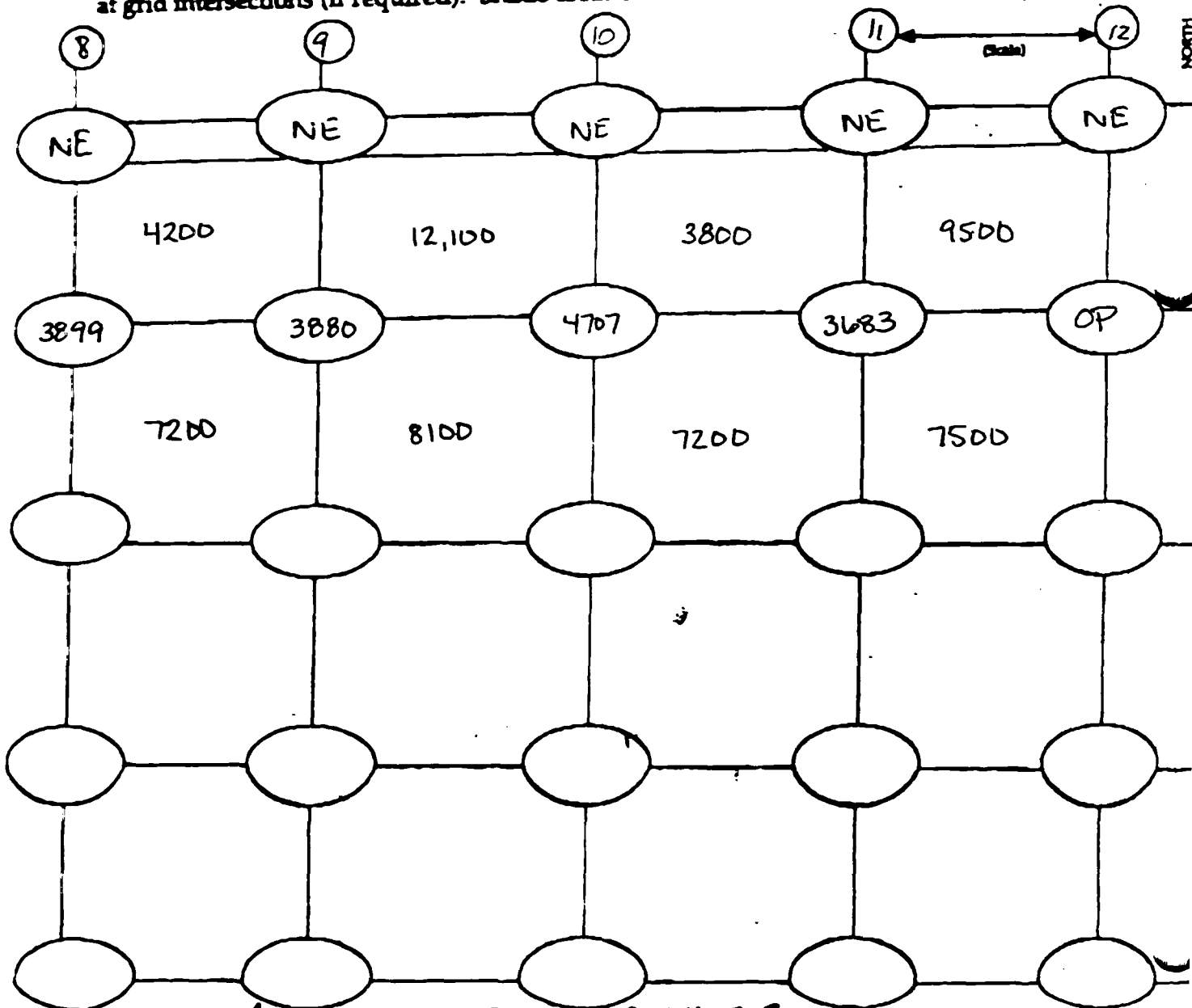
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5

Background 4-615 cpm

Action Level ^{US} 20680 / ^S 6988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 - Exclusion zone boundary NE=Not excavated SL=Slope



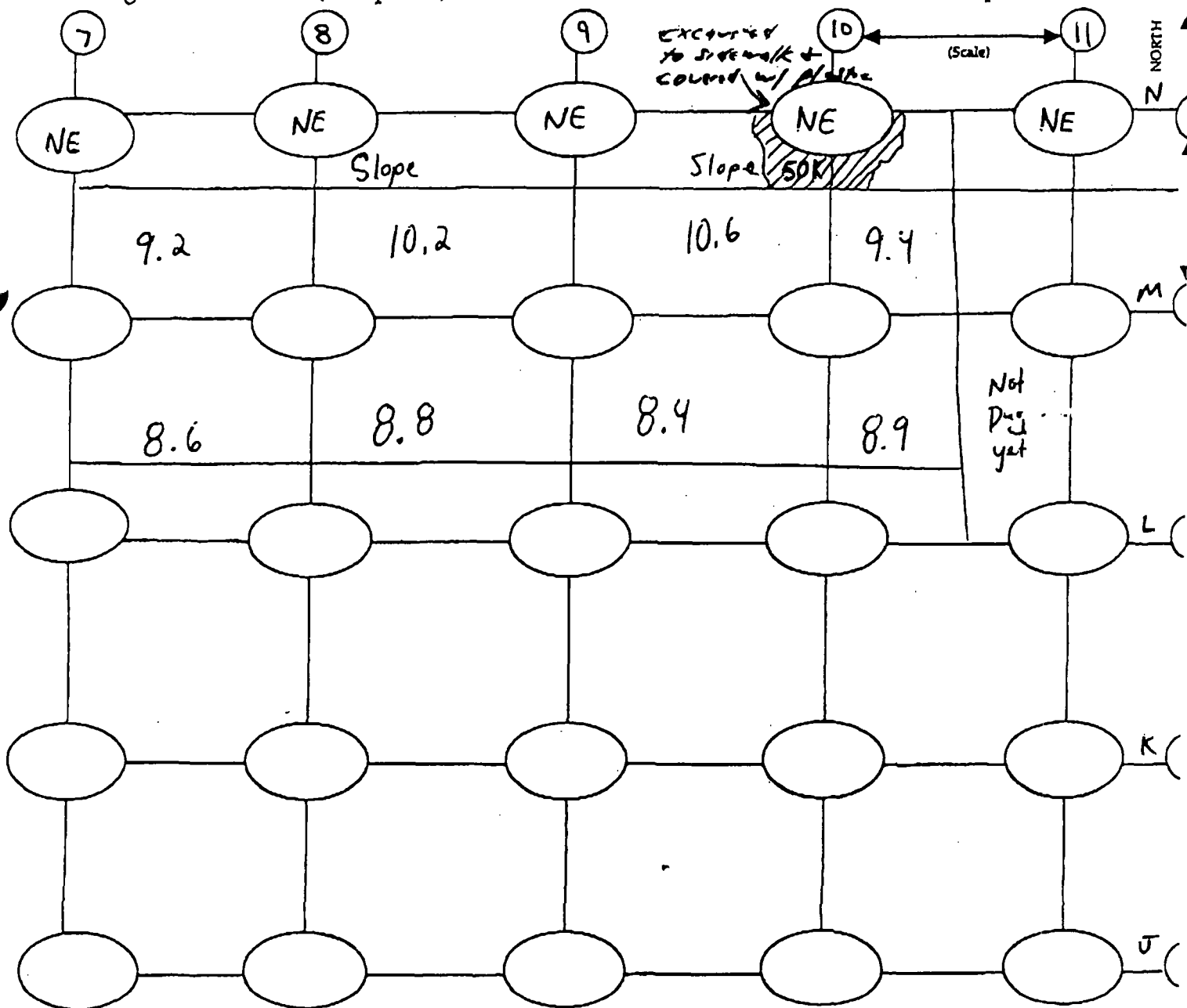
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 1

STS Consultants, Ltd.

Date 9-13-02Technician Tim O'BrienInst. Model Ledlum 2221Serial No. 126496 / 168143Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation Per EPABackground 6K-9K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/17/02

Technician Jerry Krane

Inst. Model Ludlum 2221

Serial No.	meter #	Probe #
	126496	168143

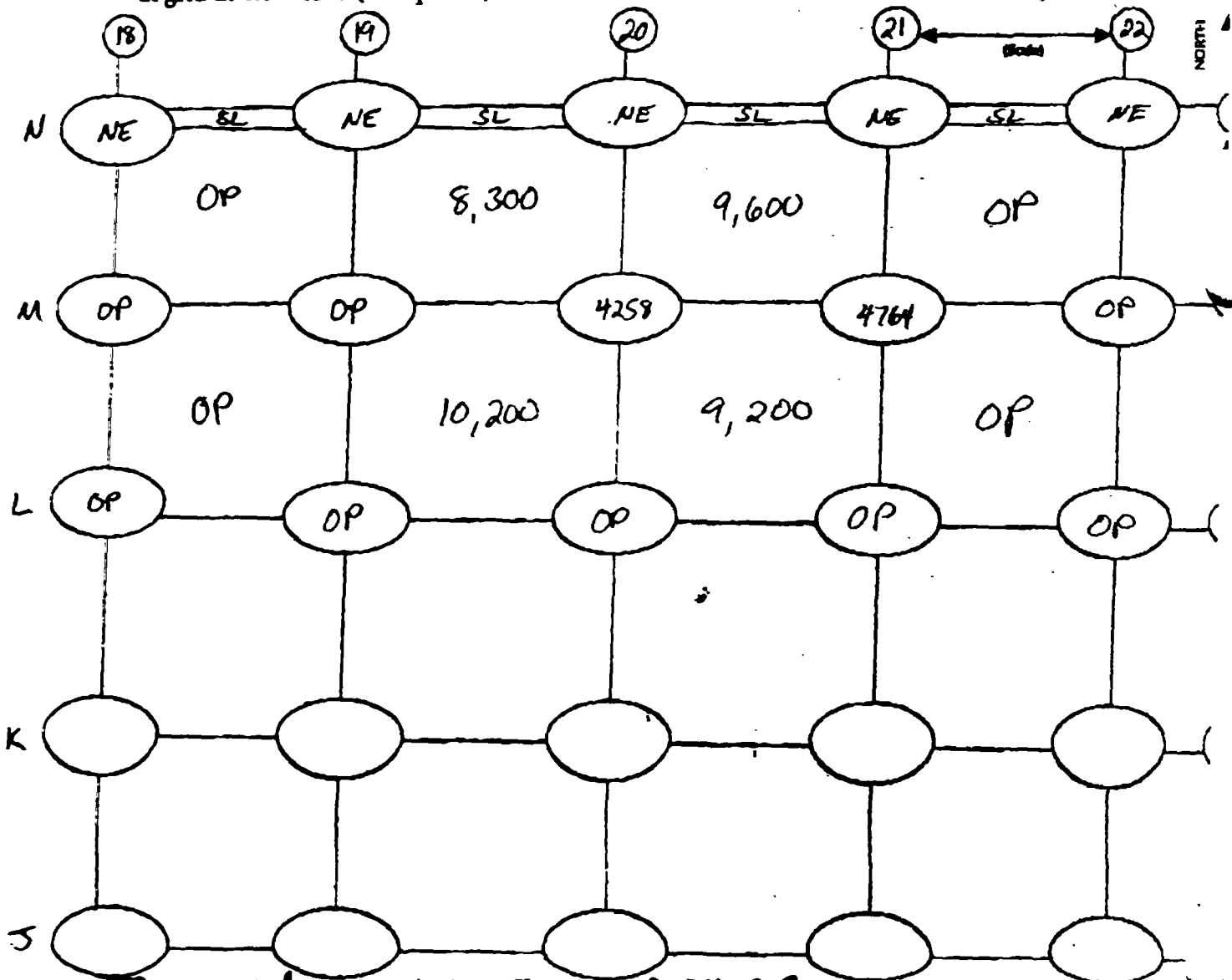
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 5K-7K cpm

Action Level: 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of 0.0m or less
 NE - Exclusion zone boundary NE = Not excavated SL = Slope



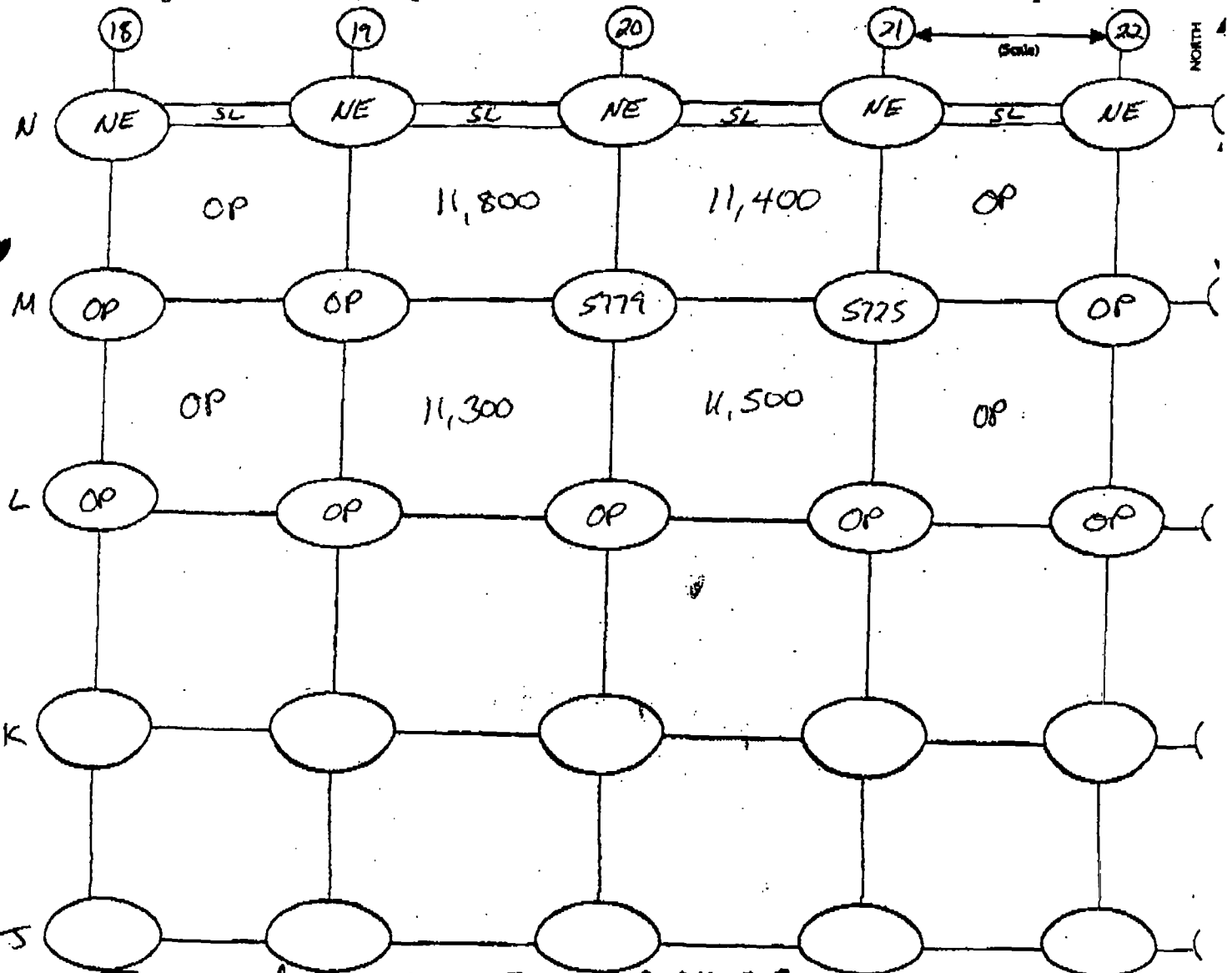
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 6

STS Consultants, Ltd.

Date 9/17/02Technician Jerry KraneInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background SK - 715 cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

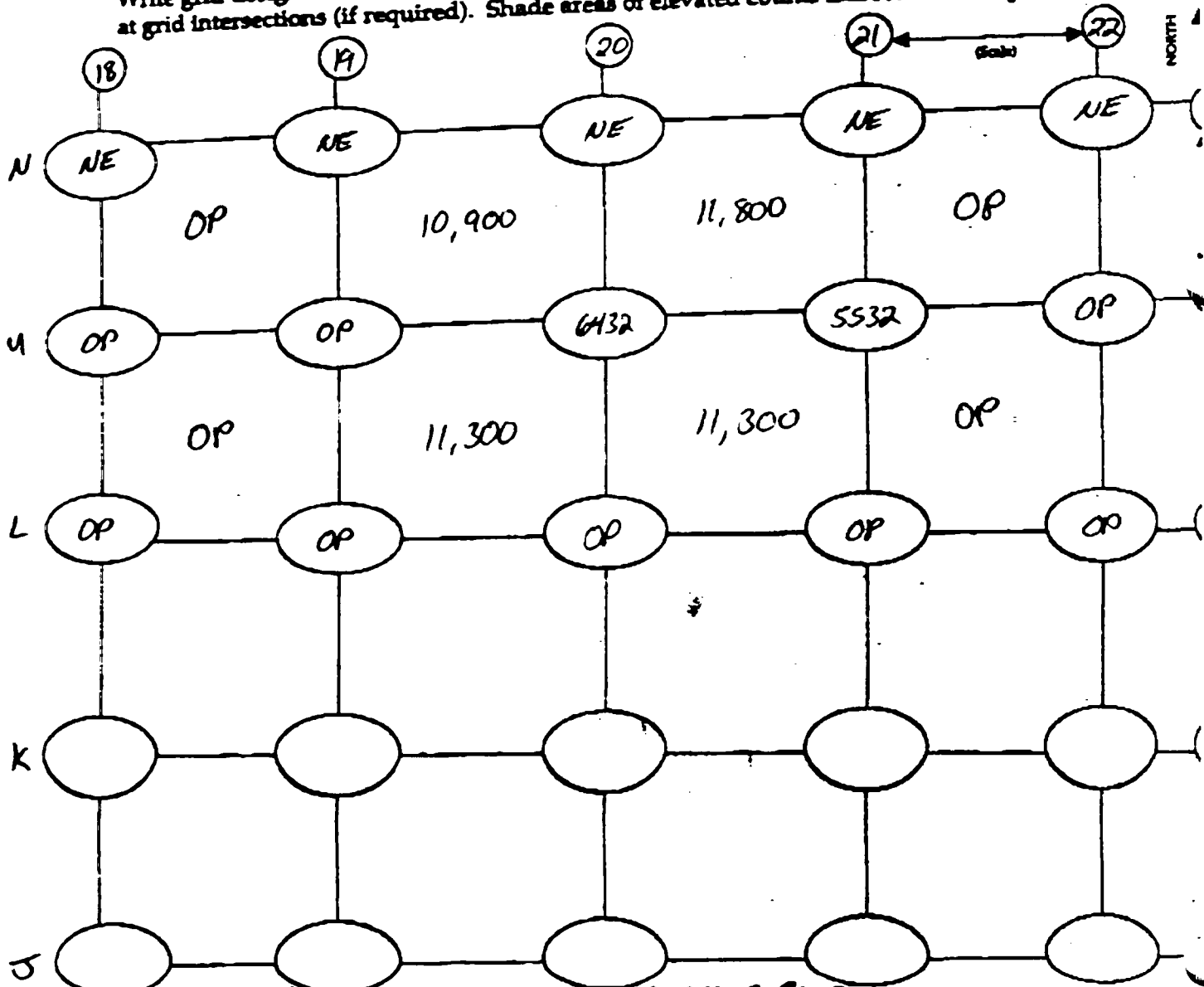
 Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/17/02Technician Serry Kram
 Meter # 126496 Probe # 168143
Inst. Model Ludlum 2221Lift Elevation -3.0'
 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded

 Background 5k - 7k cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Page
 SL = Slope
 NE = Not excavated

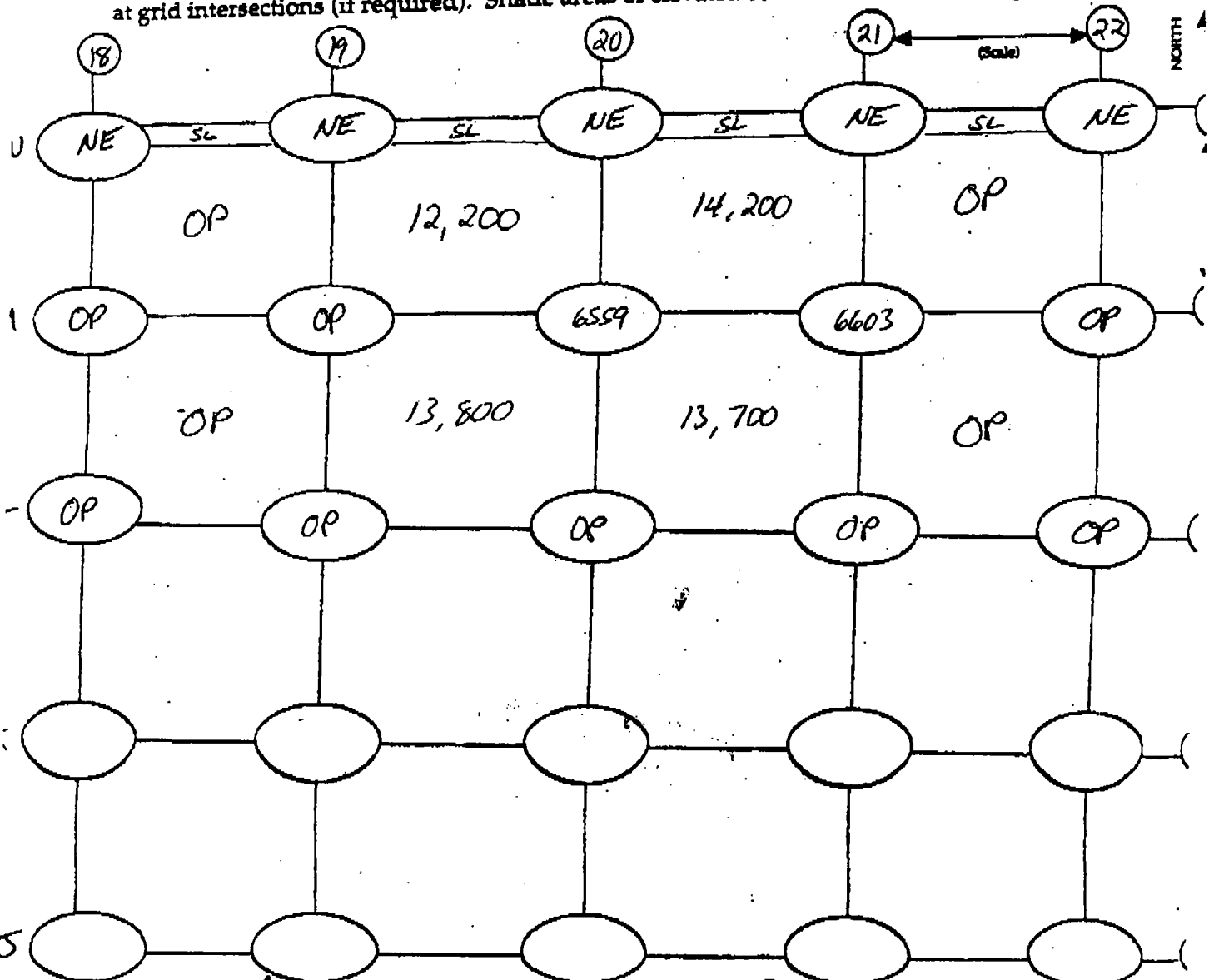


STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 6Date 9/17/02Inst. Model Ludlum 2221Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedTechnician Jerry KraneSerial No. 126496Lift Elevation -4.5'Background 5K - 7K cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 SL = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

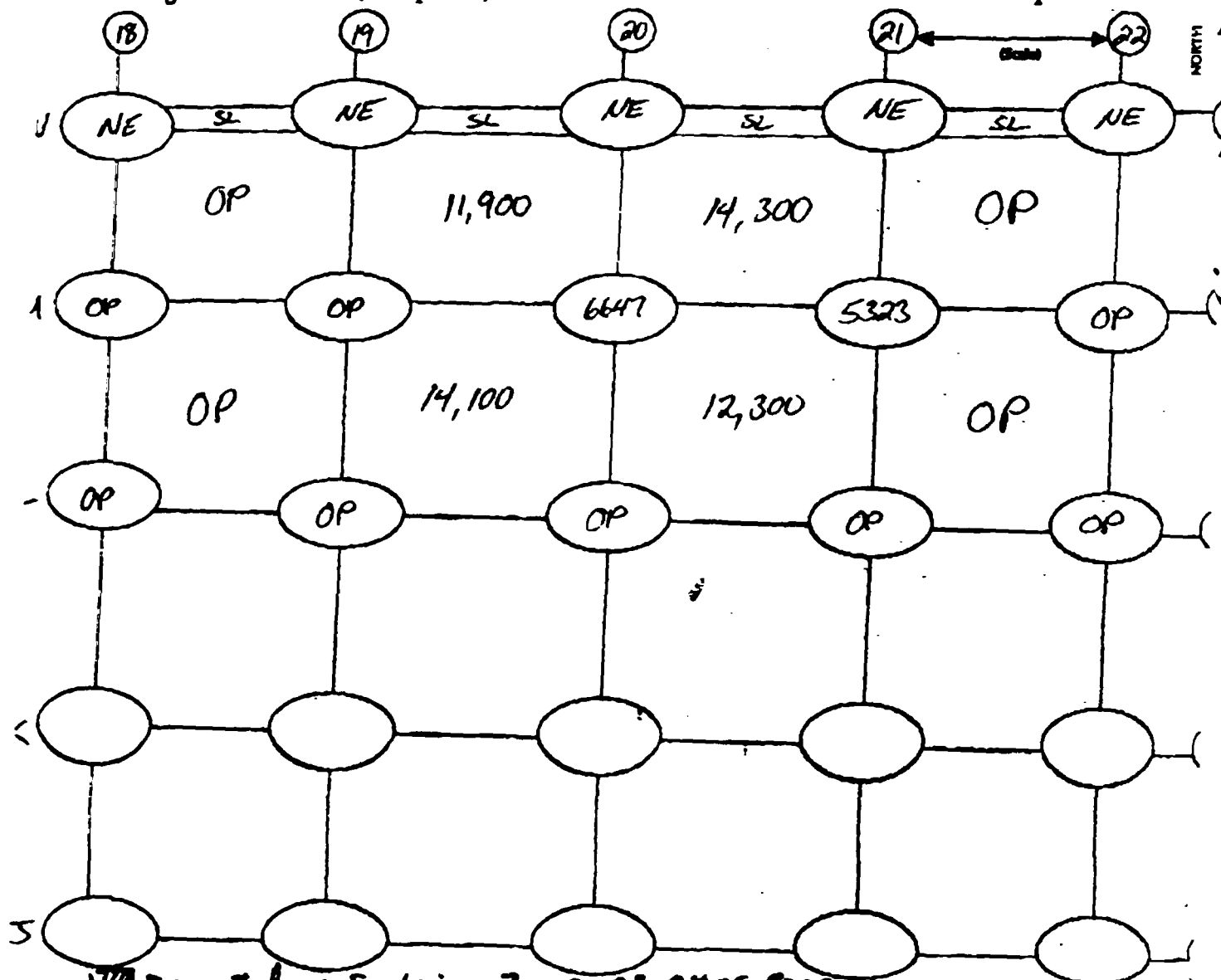
STS Consultants Ltd.

Date 9/17/02Technician Jerry KraneInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>126496</u>	<u>168143</u>

Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -6.0'Background SK - 7k cpmAction Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Probe
 SK = Exclusion zone boundary NE = Not excavated SL = Slope



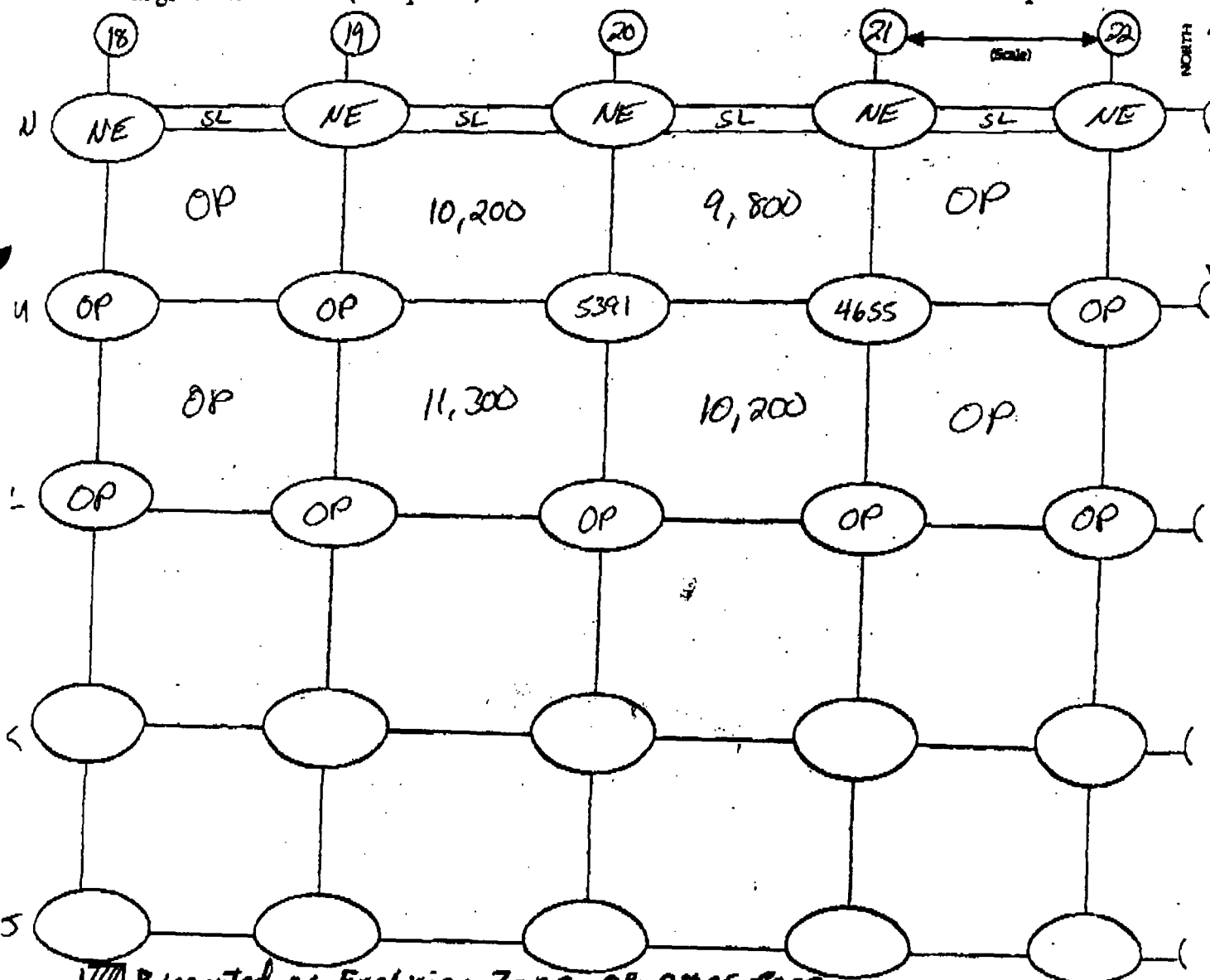
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/17/02Technician Jerry KyaneInst. Model Ludlum 2221meter # 126496 Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background SK -7K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Over Pass

Exclusion zone boundary NE=Not excavated SL=Slope



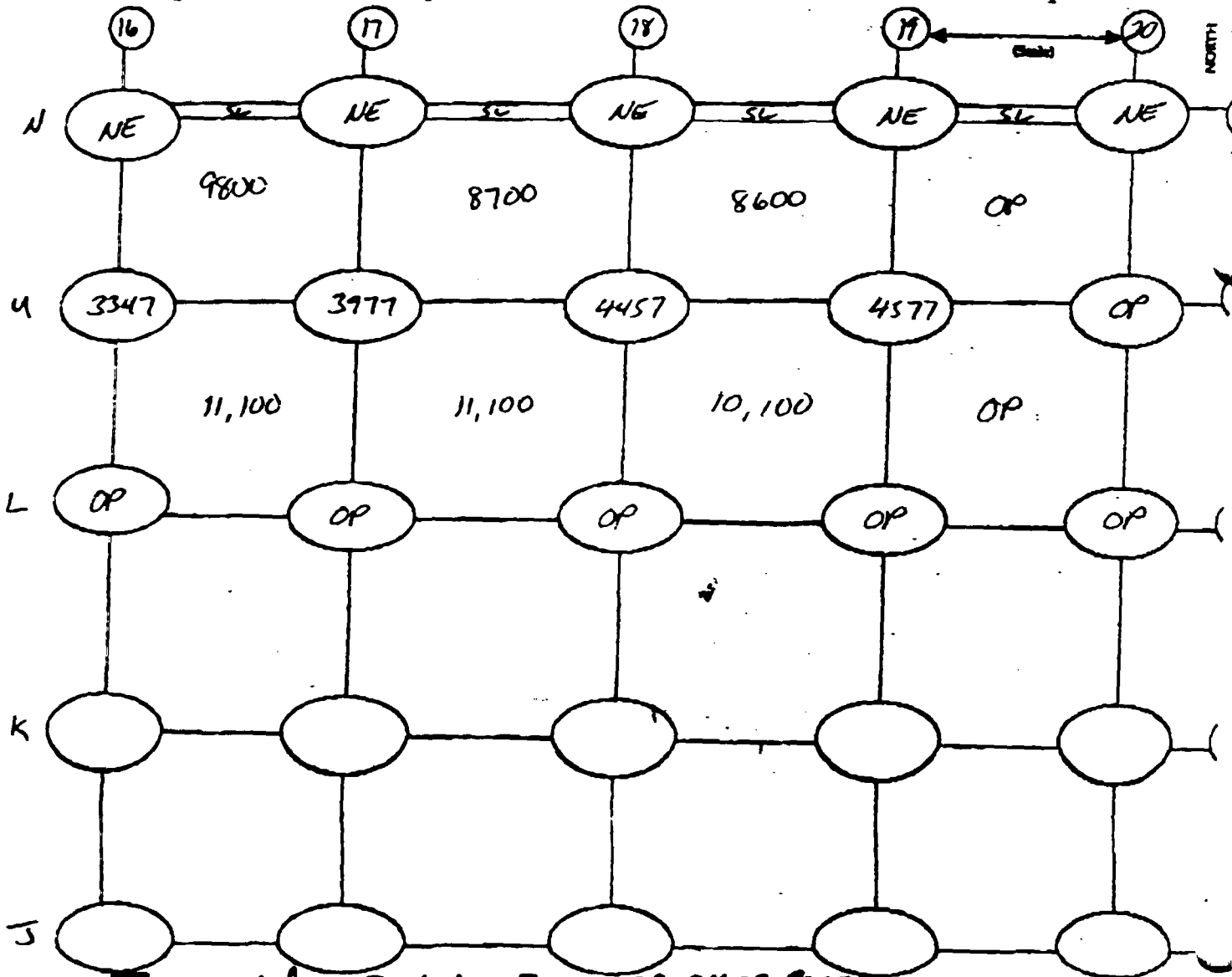
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 6

STS Consultants, Ltd.

Date 9/13/02 / 9/16/02Technician Jerry KrausInst. Model Ludlum 2221Meter # 132844 Probe # 168148Probe Type 1"x1" NaI / 2"x2" NaI
Shielded ☒ Not ShieldedLift Elevation SurfaceBackground 5K-7K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Area
Exclusion zone boundary NE = Not excavated SL = Slope

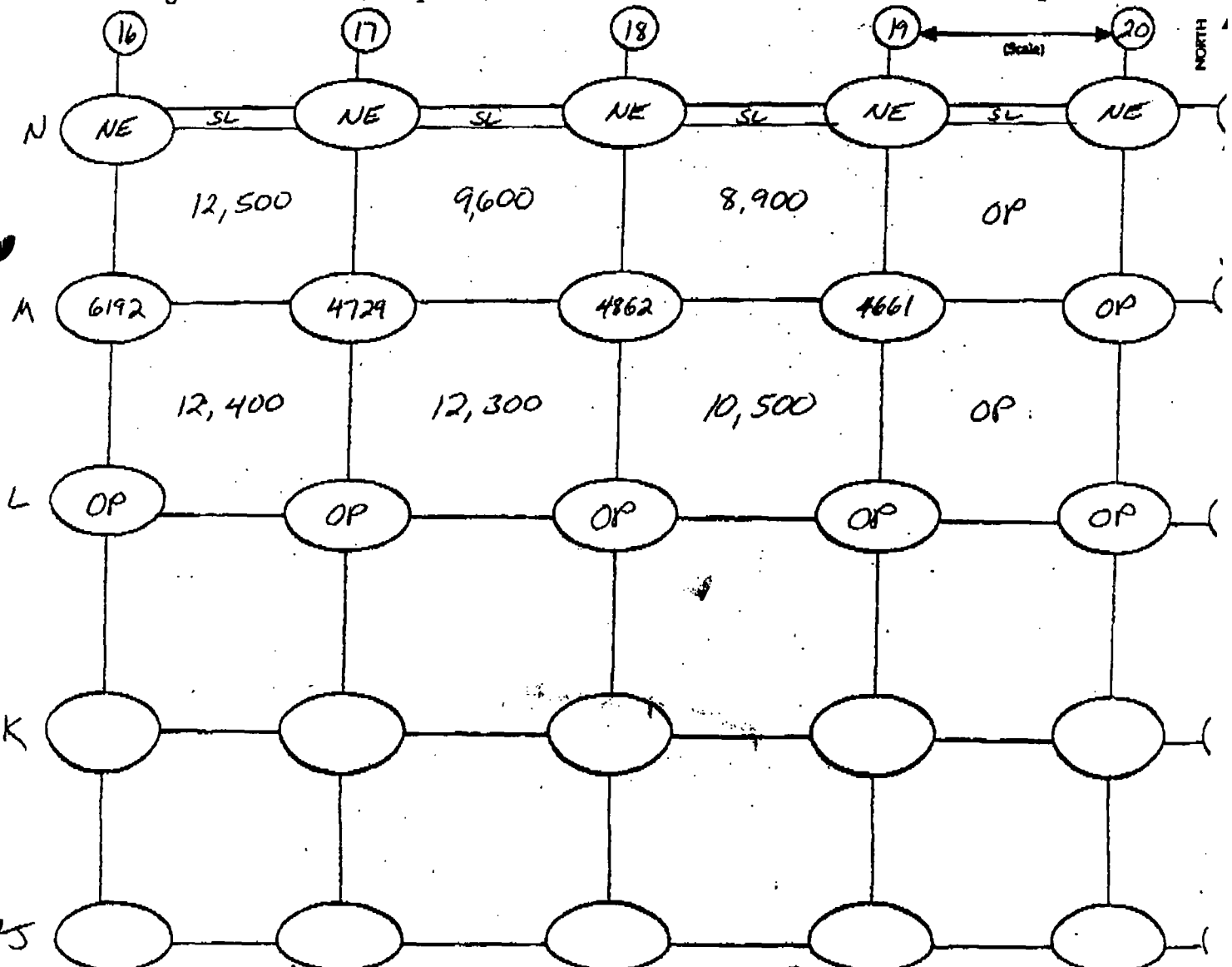


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 2 of 6Date 9/13/02 / 9/16/02Technician Jerry KrauseInst. Model Ludlum 2221meter # 132844 Probe # 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5 ft.Background 5k - 7k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 --- Exclusion zone boundary NE = Not excavated SL = Slope



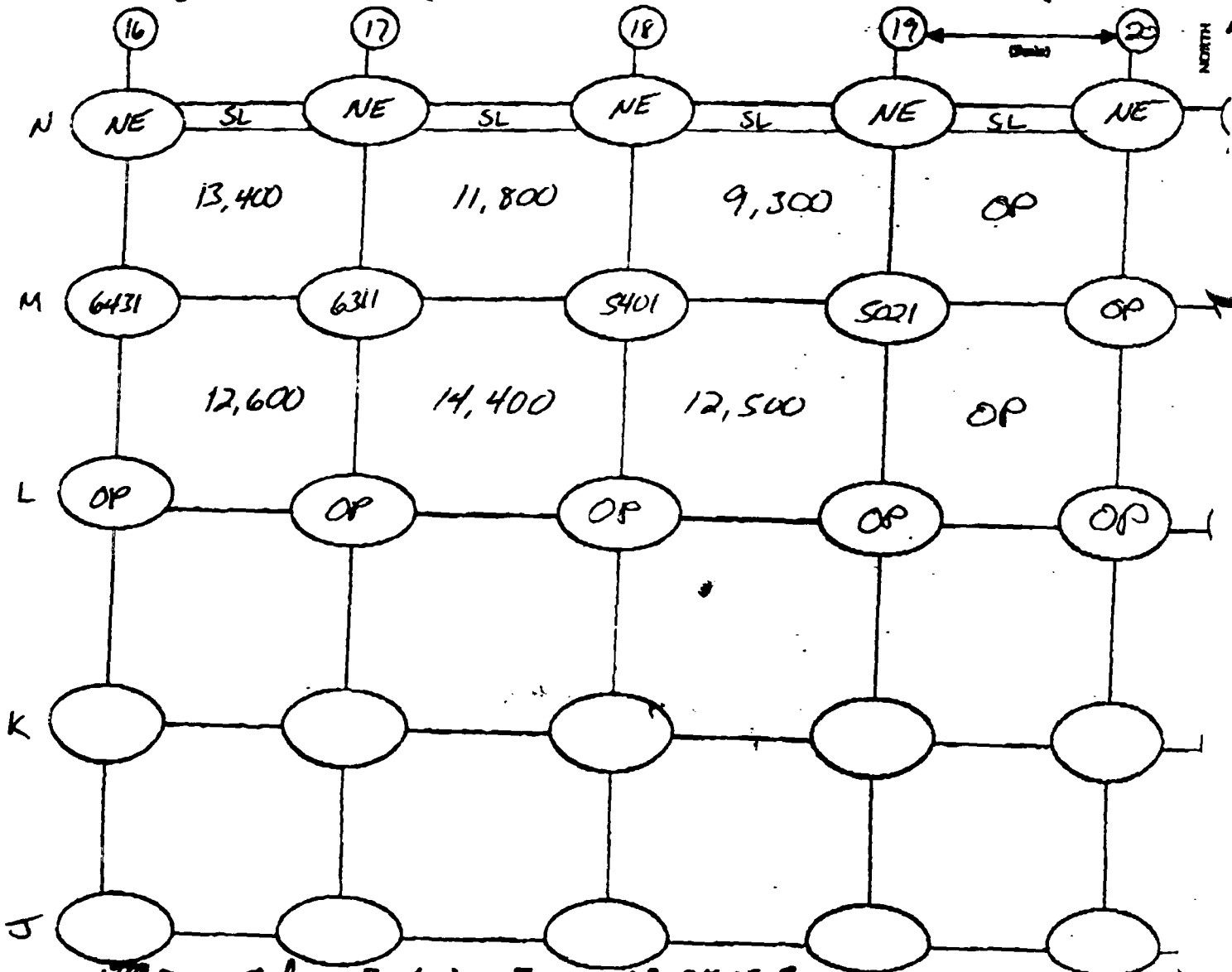
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/13/02 / 9/16/02Technician Jerry KrausInst. Model Ludlum 2221Serial No. 132844 / 168148Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3.0'Background Sk - 71c cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = over pass
☐ Exclusion zone boundary NE = Not excavated SL = Slope



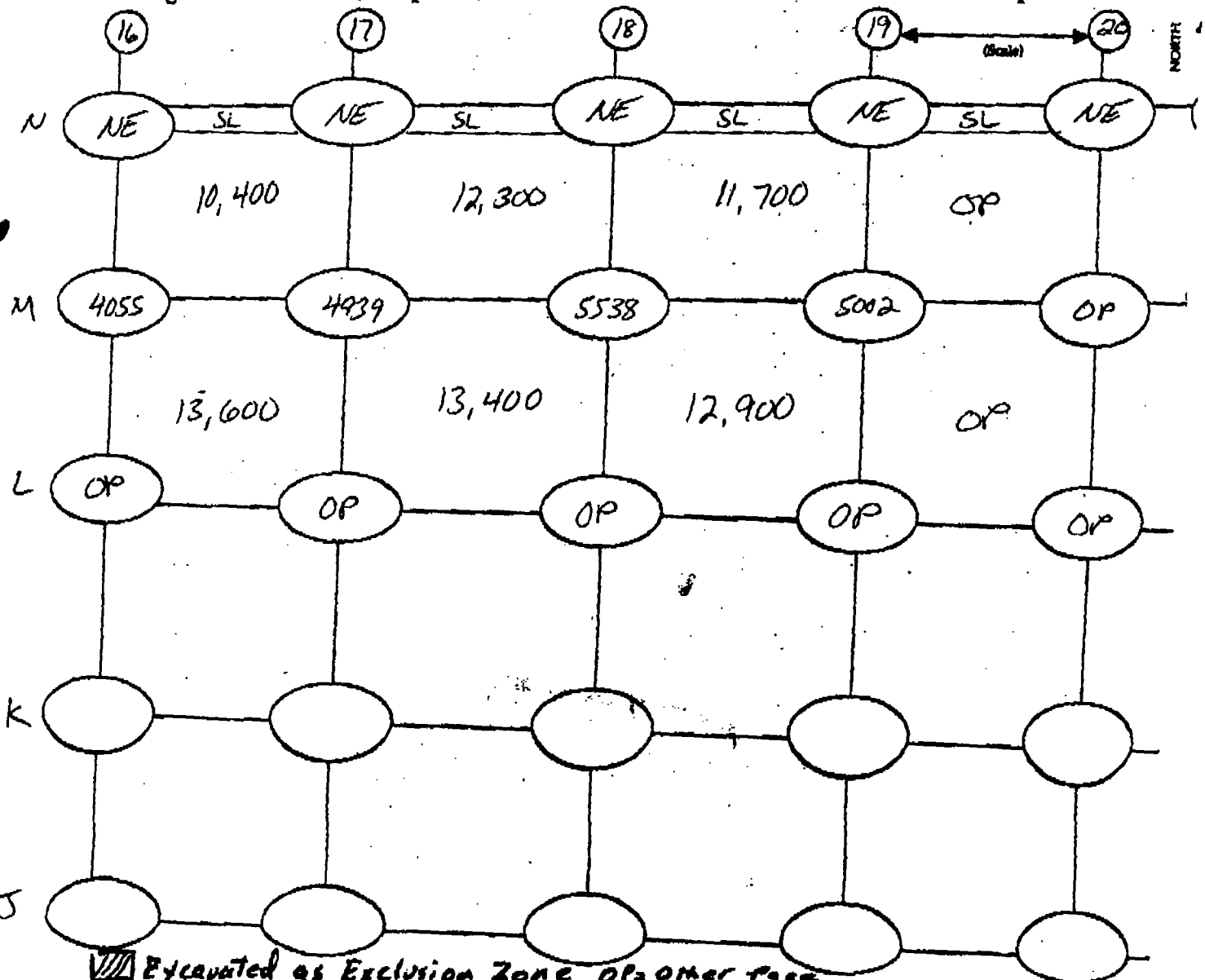
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/13/02 / 9/16/02Technician Jerry KraneInst. Model Ludlum 2221meter # 132844 Probe # 165148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 5k-7k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
 * - Exclusion zone boundary NE = Not excavated SL = Slope



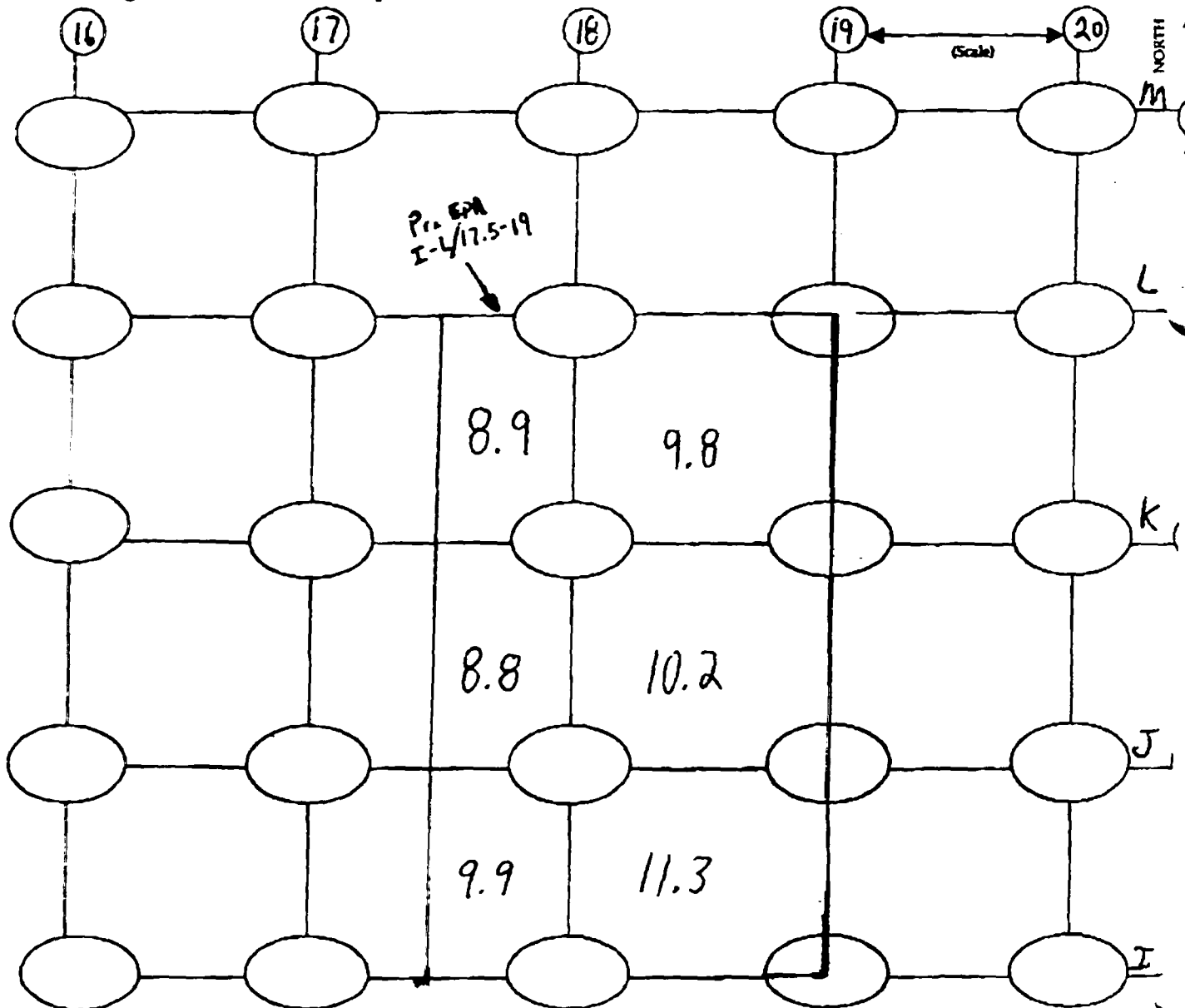
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 1

STS Consultants, Ltd.

Date 9-18-02Technician Tim O'BrienInst. Model Ludlum 2221meter # 126496 / Probe # 168143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation Pr. EPABackground 4-6K cpmAction Level 20,600 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



✓ 6A#



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 1 of 6

Date 9/17/2002

Technician Lindsay Aschim

Inst. Model Ludlum 2221

Serial No. 1214916 / 168143

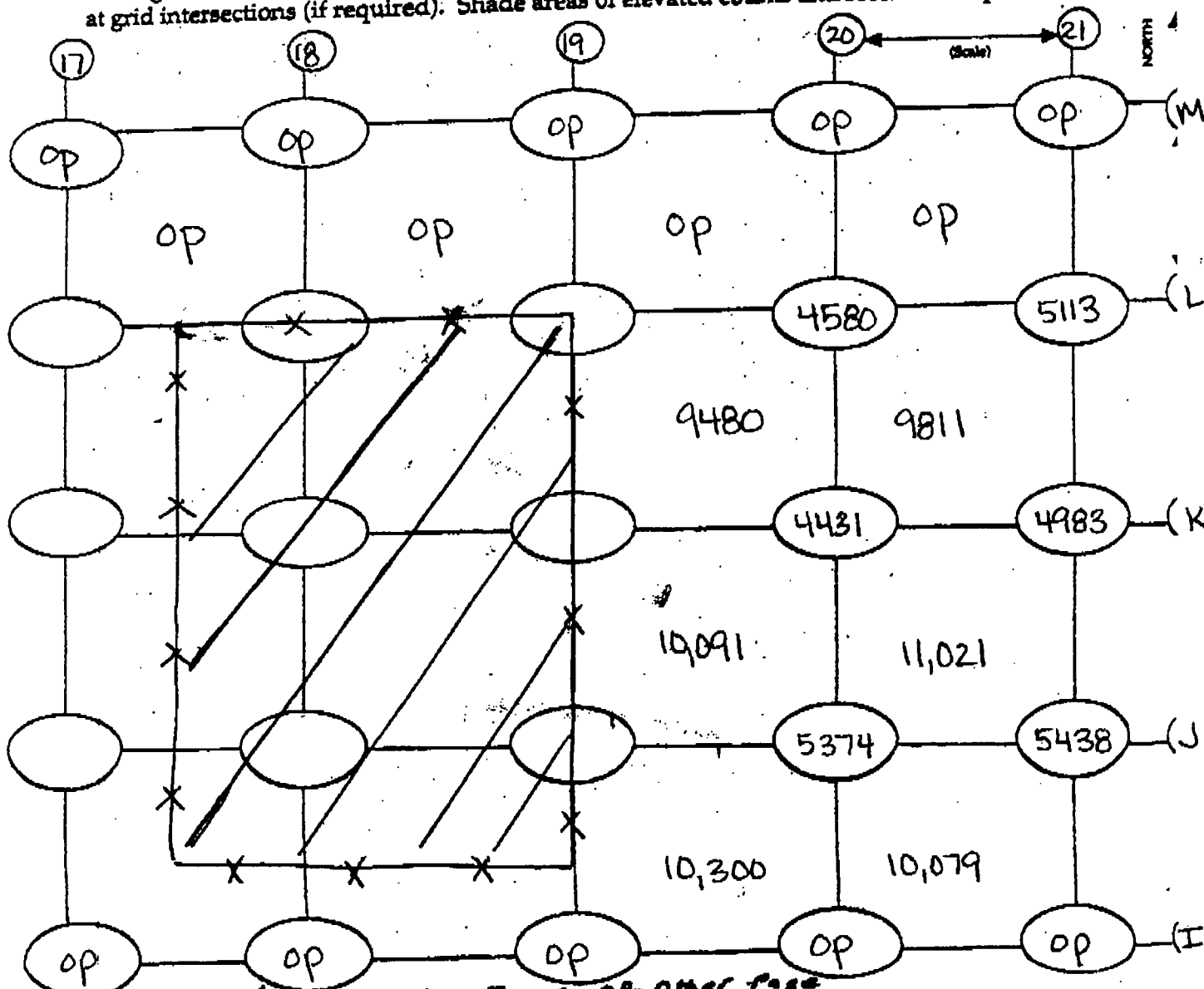
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 4.6 K cpm

Action Level 20,1680 / 1988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other face
NE = Not excavated SL = Slope



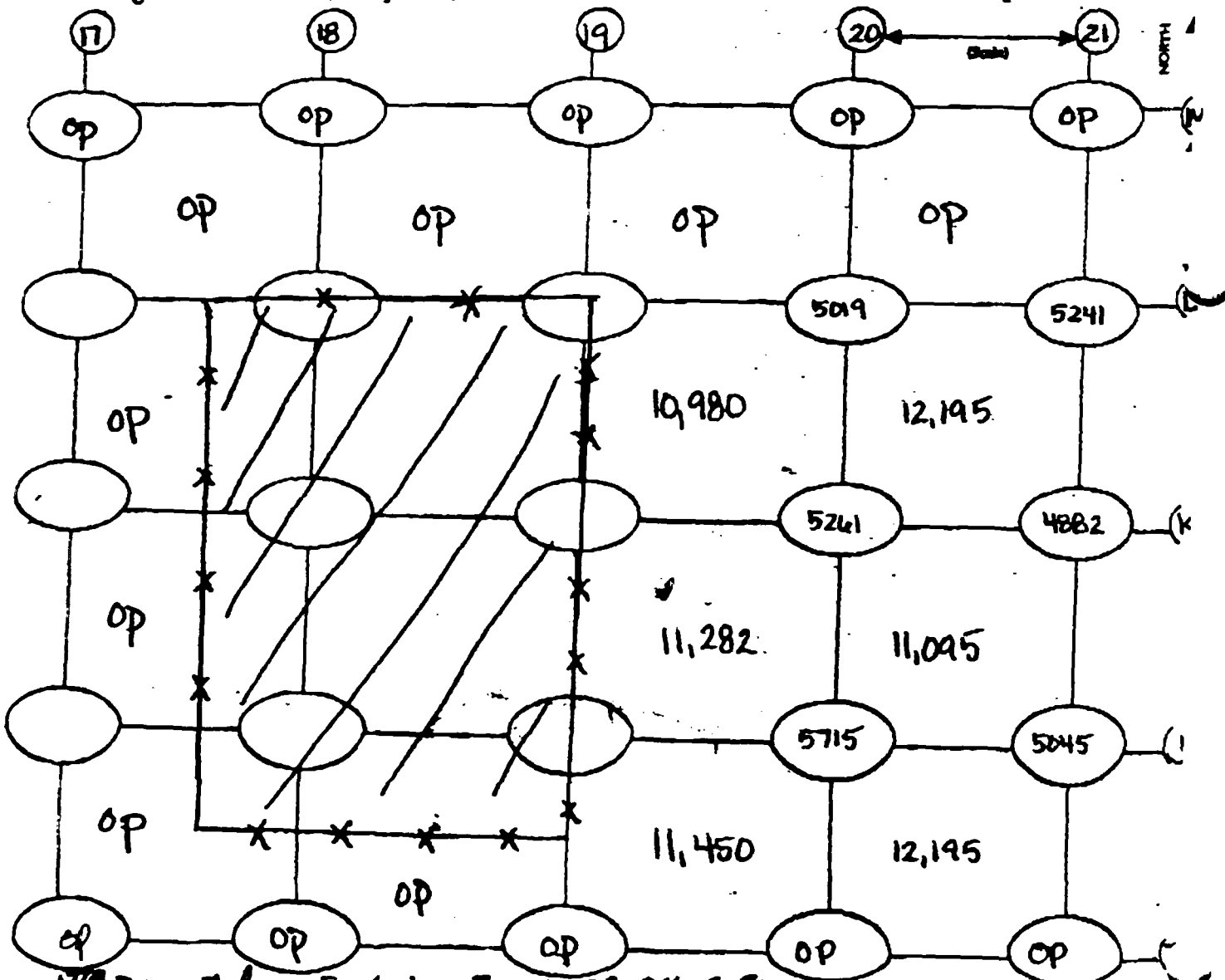
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 1e

STS Consultants, Ltd.

Date 9/17/2002Technician Lindsay Aschim
meter # Probe #Inst. Model Ludlum 2221Serial No. 121496 1108143Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 4-6k cpmAction Level 20,680 / 1,988 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone op. omar page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 6

STS Consultants, Ltd.

Date 9/17/2002

Technician Lindsay Aschim
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 121496 1168143

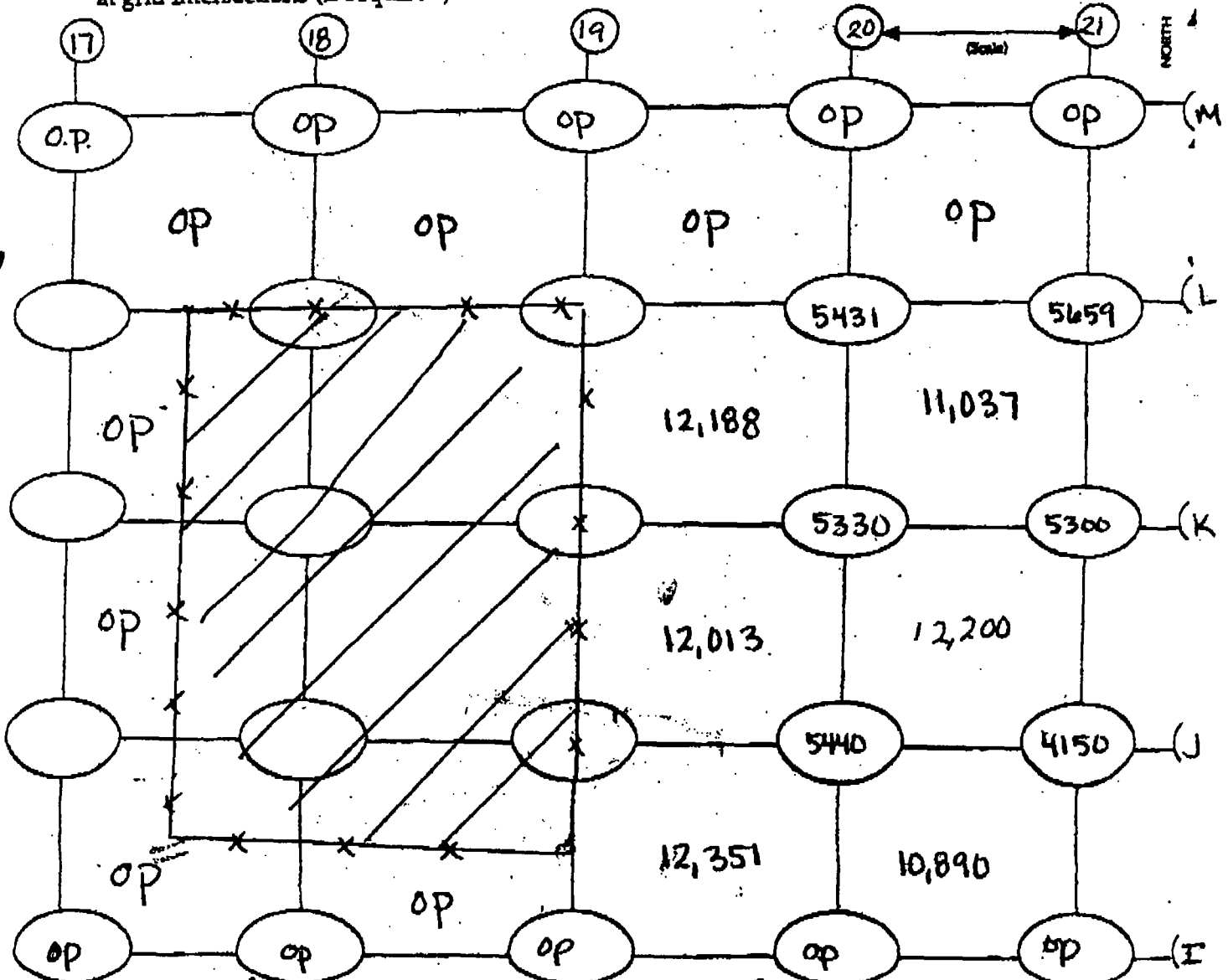
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3

Background 4-6K cpm

Action Level 20,1680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 4

STS Consultants, Ltd.

Date 9/17/2002

Technician Lindsay Aschm
meters *Probe*

Inst. Model Ludlum 2221

Serial No. 124496 / 1168143

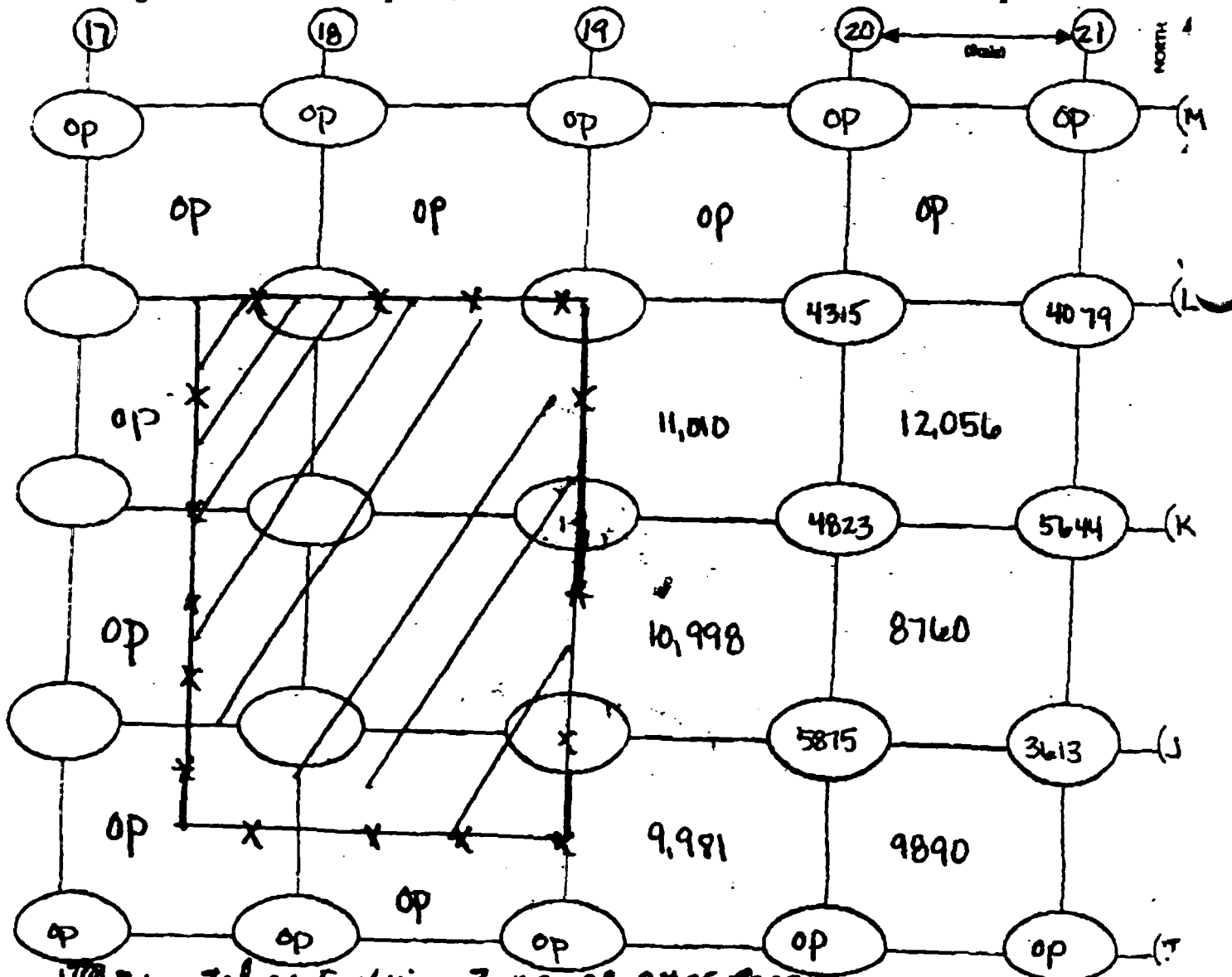
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5

Background 4.6 K cpm

Action Level 20,160 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone *OP = Other Probe*
NE = Not excluded SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/17/2002

Technician Lindsay Aschim

Inst. Model Ludlum 2221

meter # 126496 Probe # 116B143

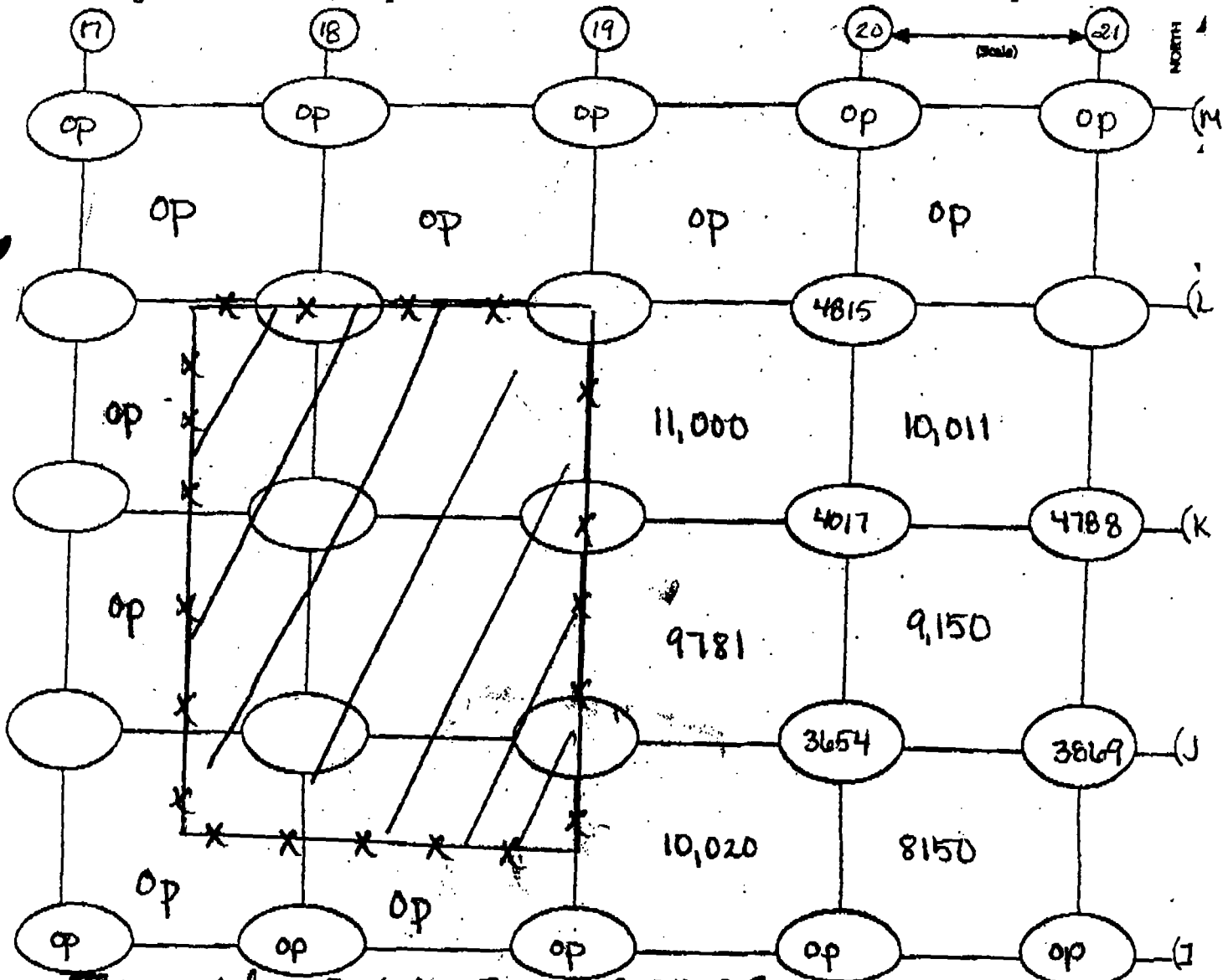
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1

Background 46 K cpm

Action Level 20,1680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone op=over pass
zone boundary NE=NOT excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/17/2002

Technician Lindsay Aschim

meter # 126496 Probe # 168143

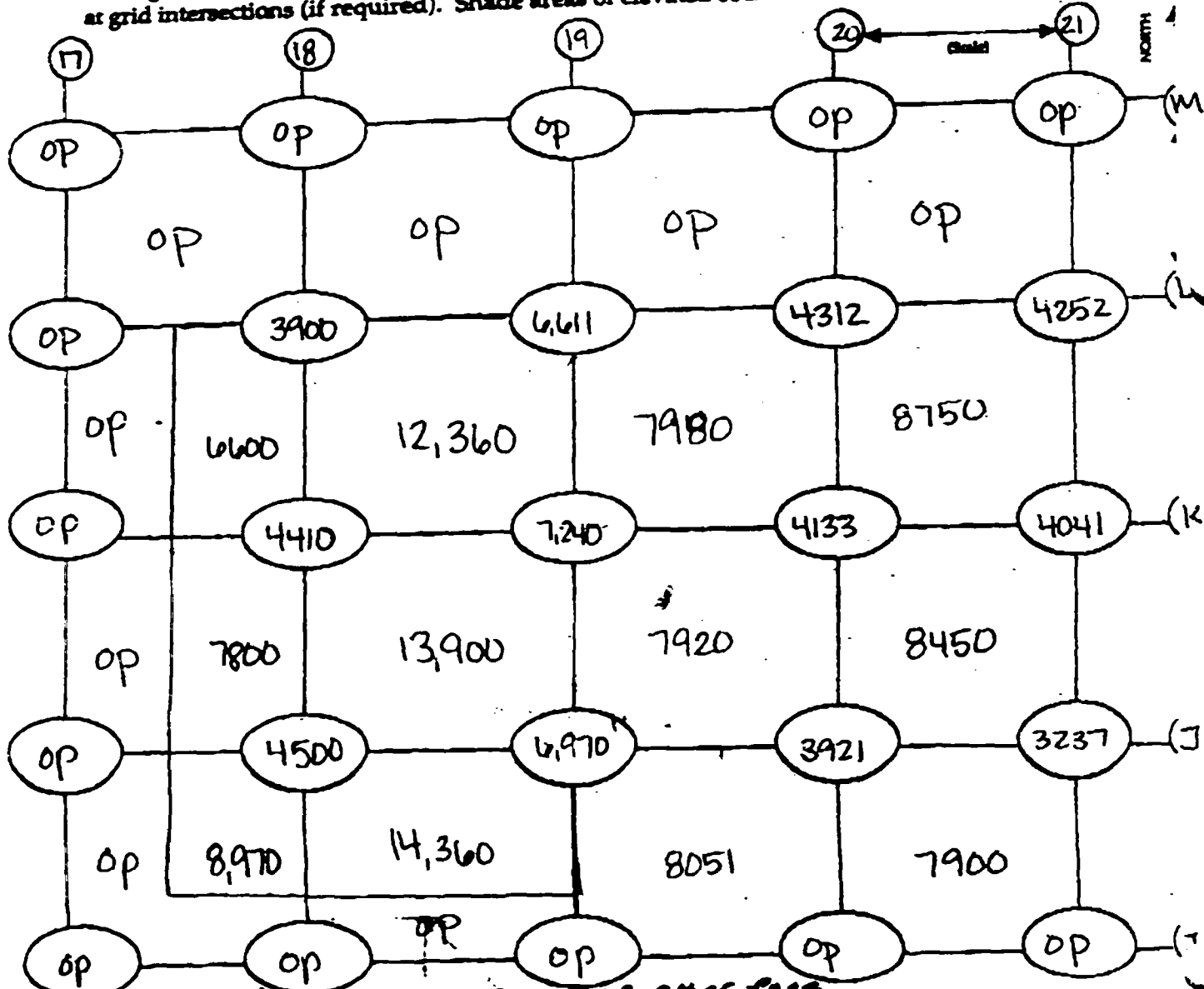
Inst. Model Ludlum 2221

Lift Elevation -7.5

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Background 4.6 K cpm Action Level 20,680 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Over Pass
- - - - - zone boundary NE = Not excavated SL = Slope

✓ 6/11/02



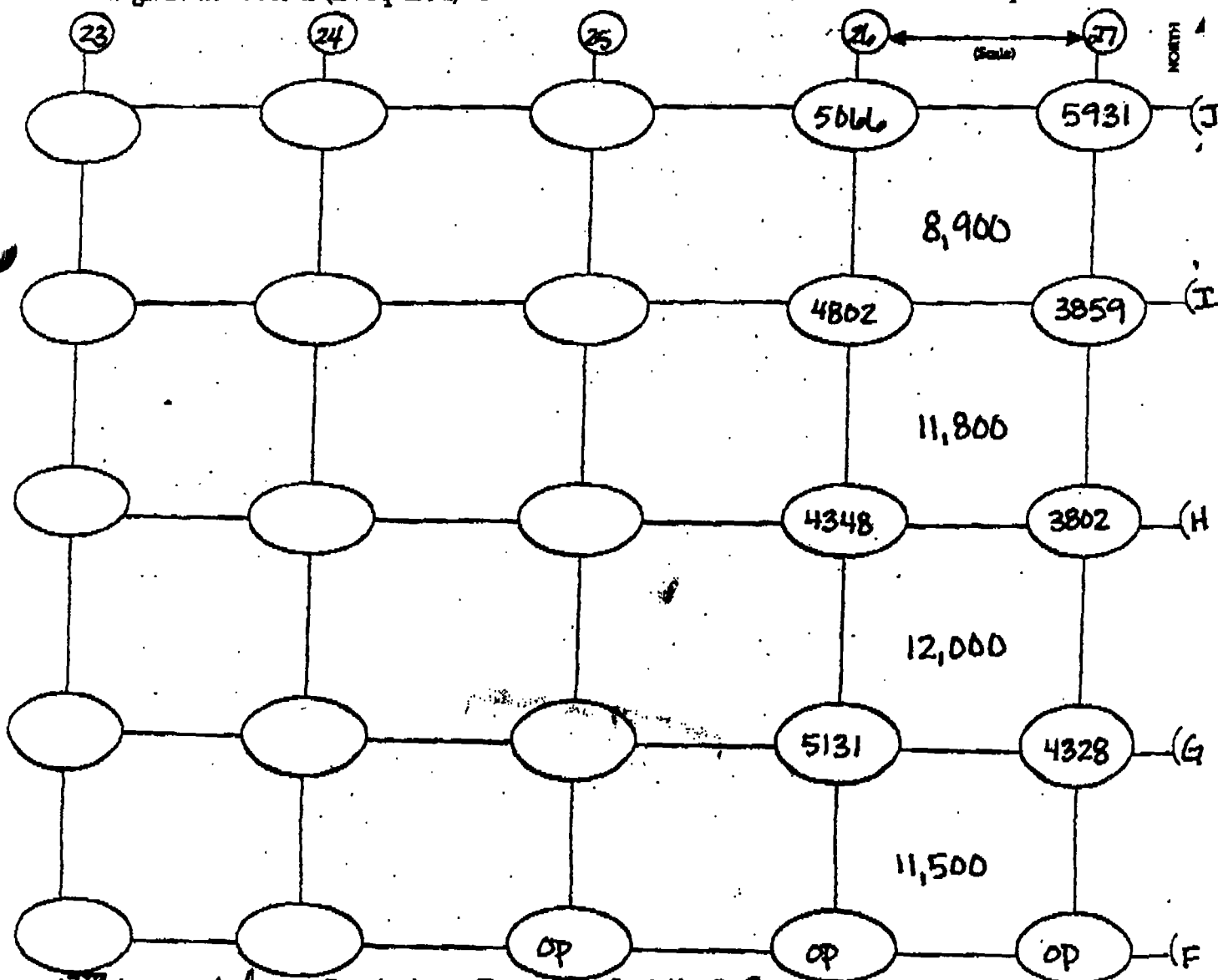
RADIATION SURVEY FORM

Project # 25585-KT Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/18, 9/19/02Technician L. AschimInst. Model Ludlum 2221meter # / Probe #
Serial No. 127242 / 116144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 6,000 cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



EXCLUDED as Exclusion Zone

EXCLUDED as Exclusion Zone boundary NE = Not excavated SL = Slope



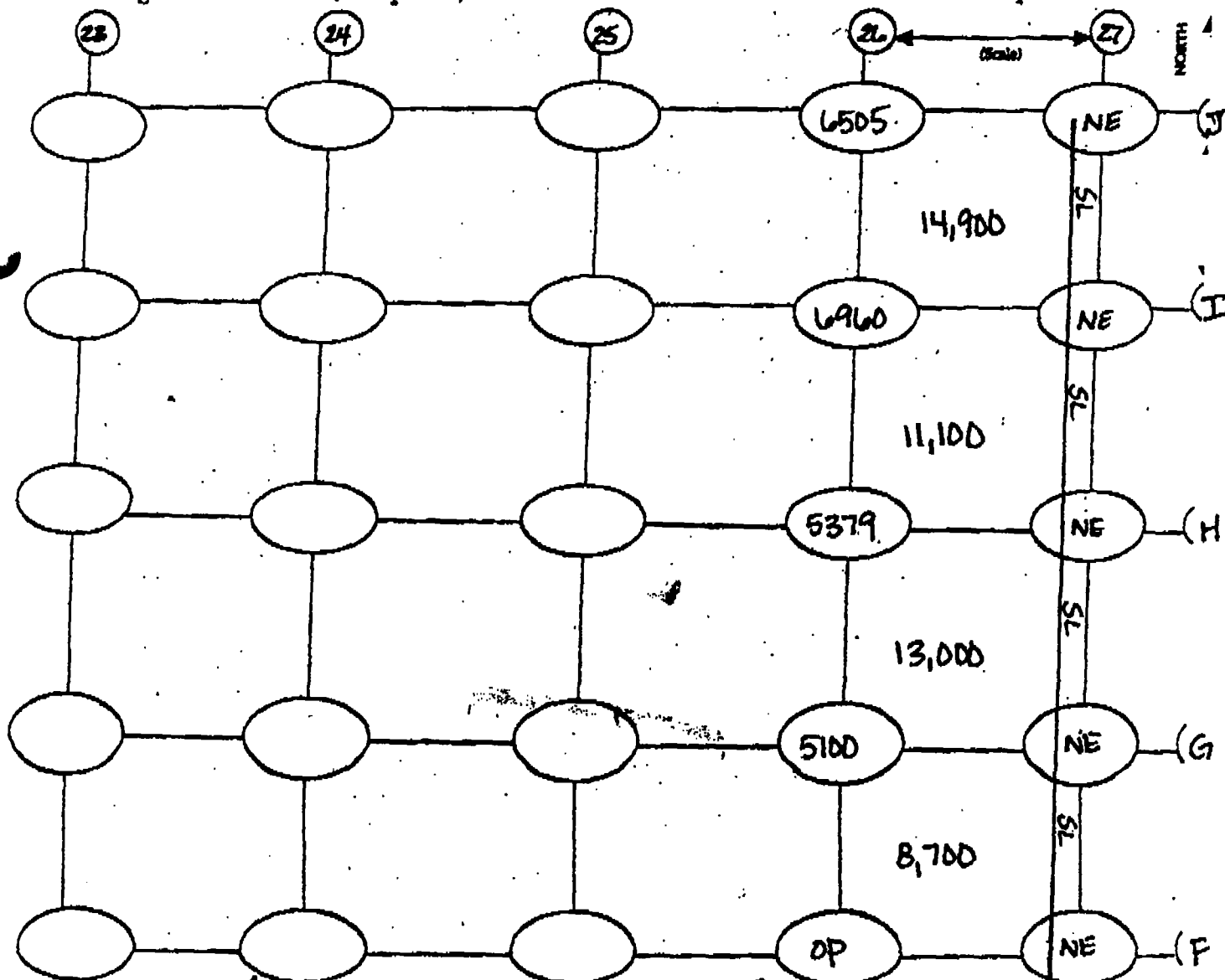
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/18/02, 9/19/02Technician L. AschimInst. Model Ludlum 2221meter # Probe 22
Serial No. 127242 / 1108144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3Background 6000 cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



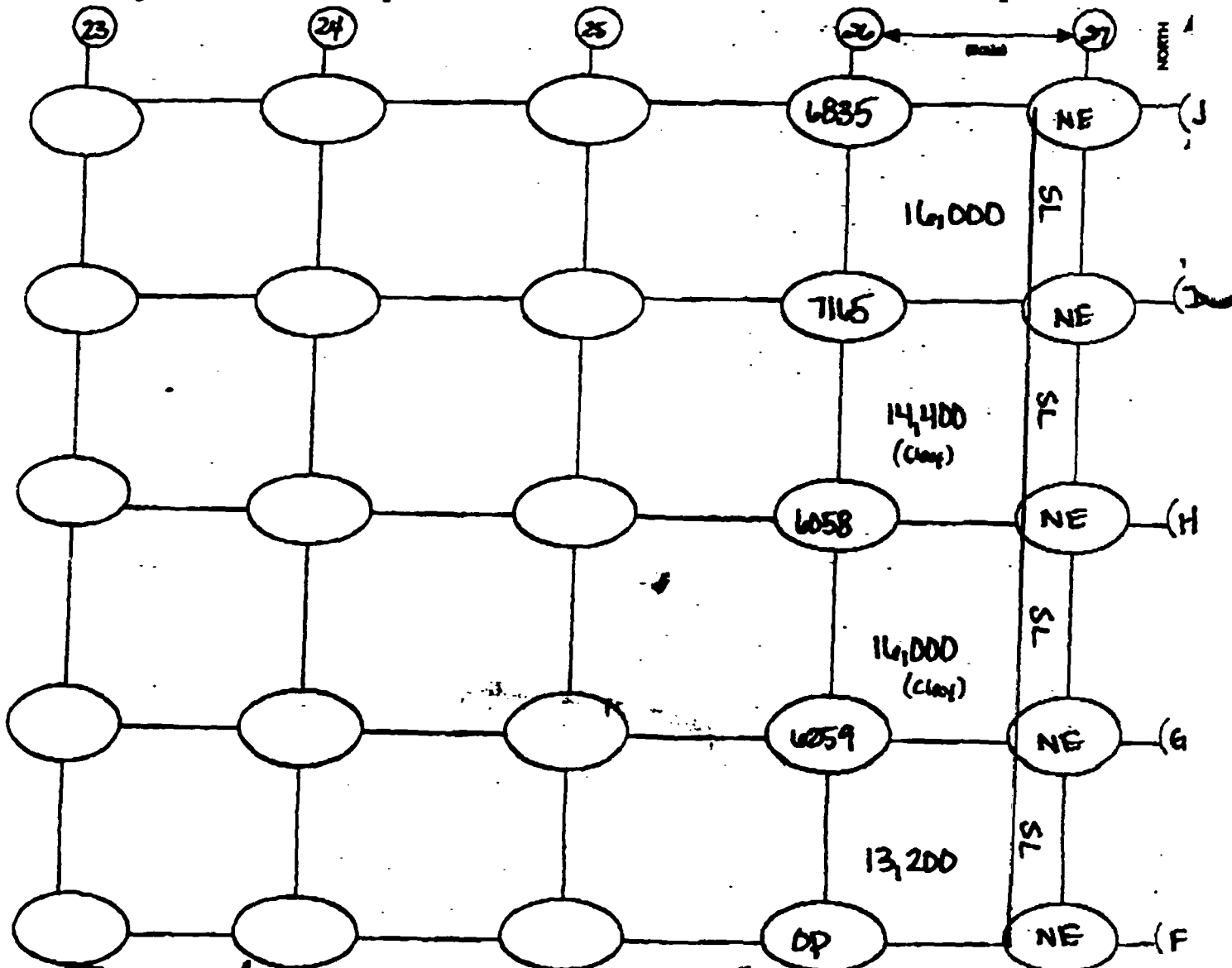
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/18, 9/19/02Technician L. AschimInst. Model Ludlum 2221Serial No. 127242 / 148144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 6000 cpm Action Level 24,012 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone DP = Other Page
SL = Exclusion zone boundary NE = Not excavated SL = Slope



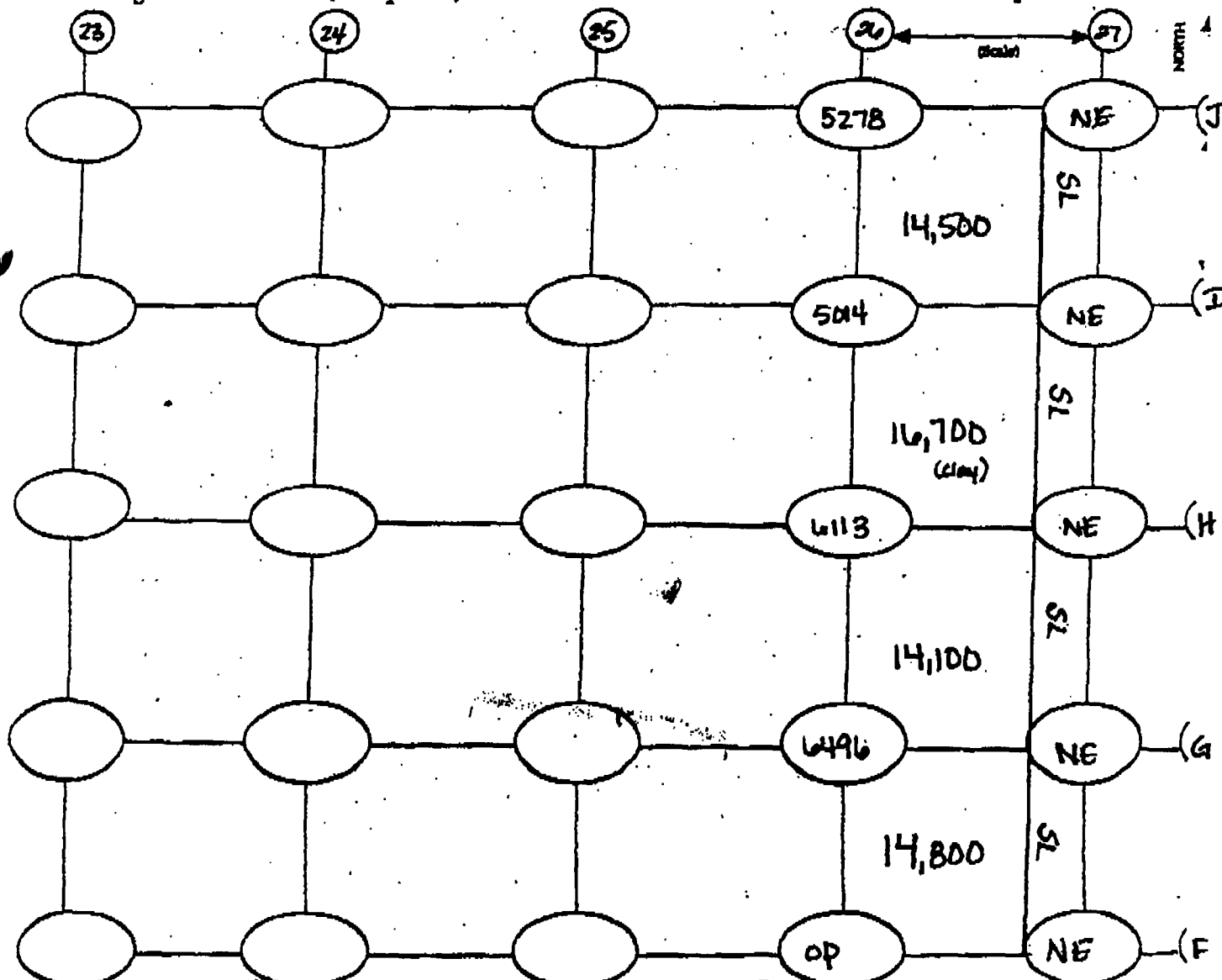
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/18, 9/19/02Technician L. AschirnInst. Model Ludlum 2221meter # Probe 33
Serial No. 127242 / 1168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 6000 cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Phase
 ***=Exclusion zone boundary NE=Not excavated SL=Slope



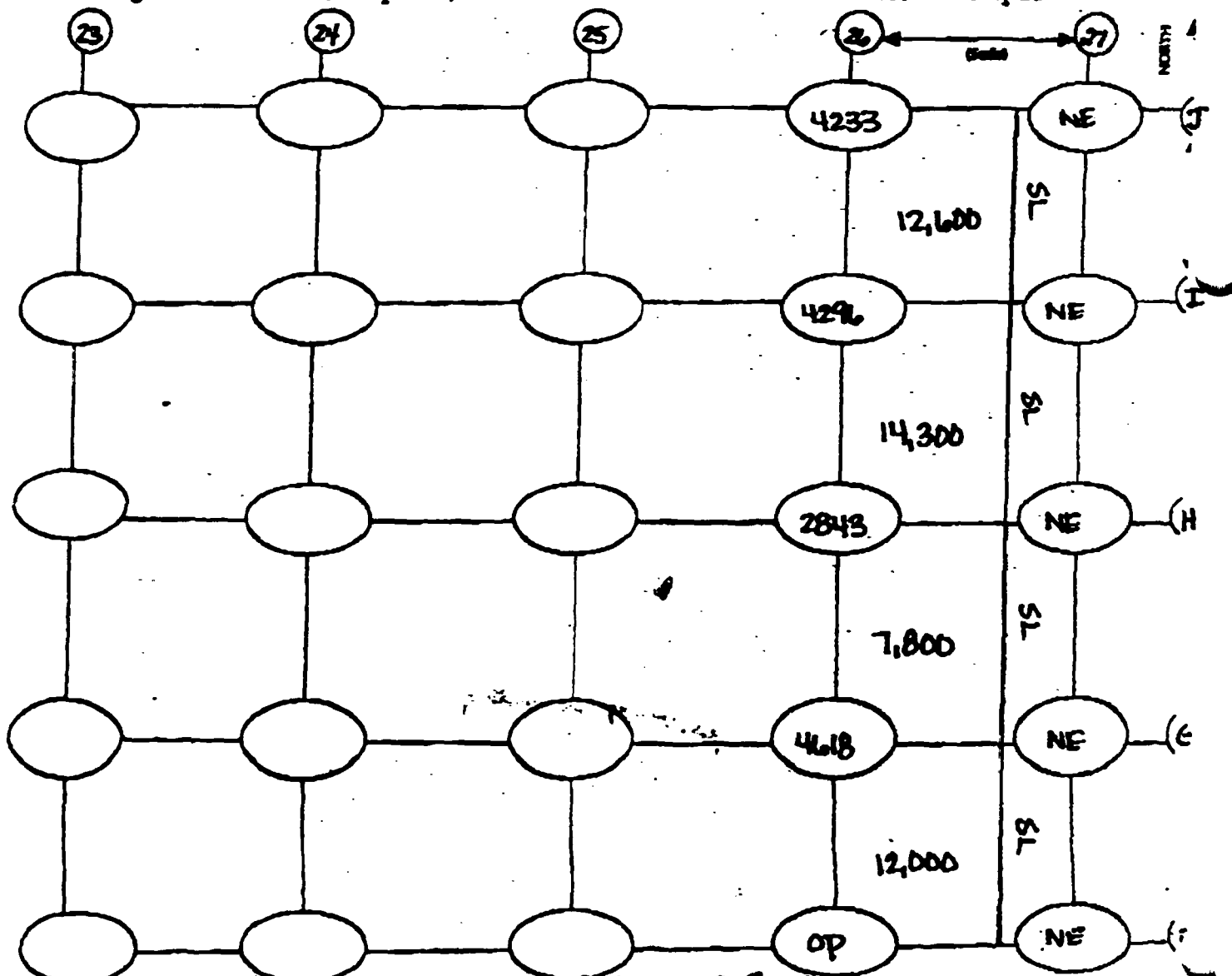
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/18, 9/19Technician L. AschimInst. Model Ludlum 2221Serial No. 127242 / 1168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7'Background 6,000 cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone per OMER page
 - Exclusion zone boundary NE = Not excluded SL = Slope

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RADIATION SURVEY FORM

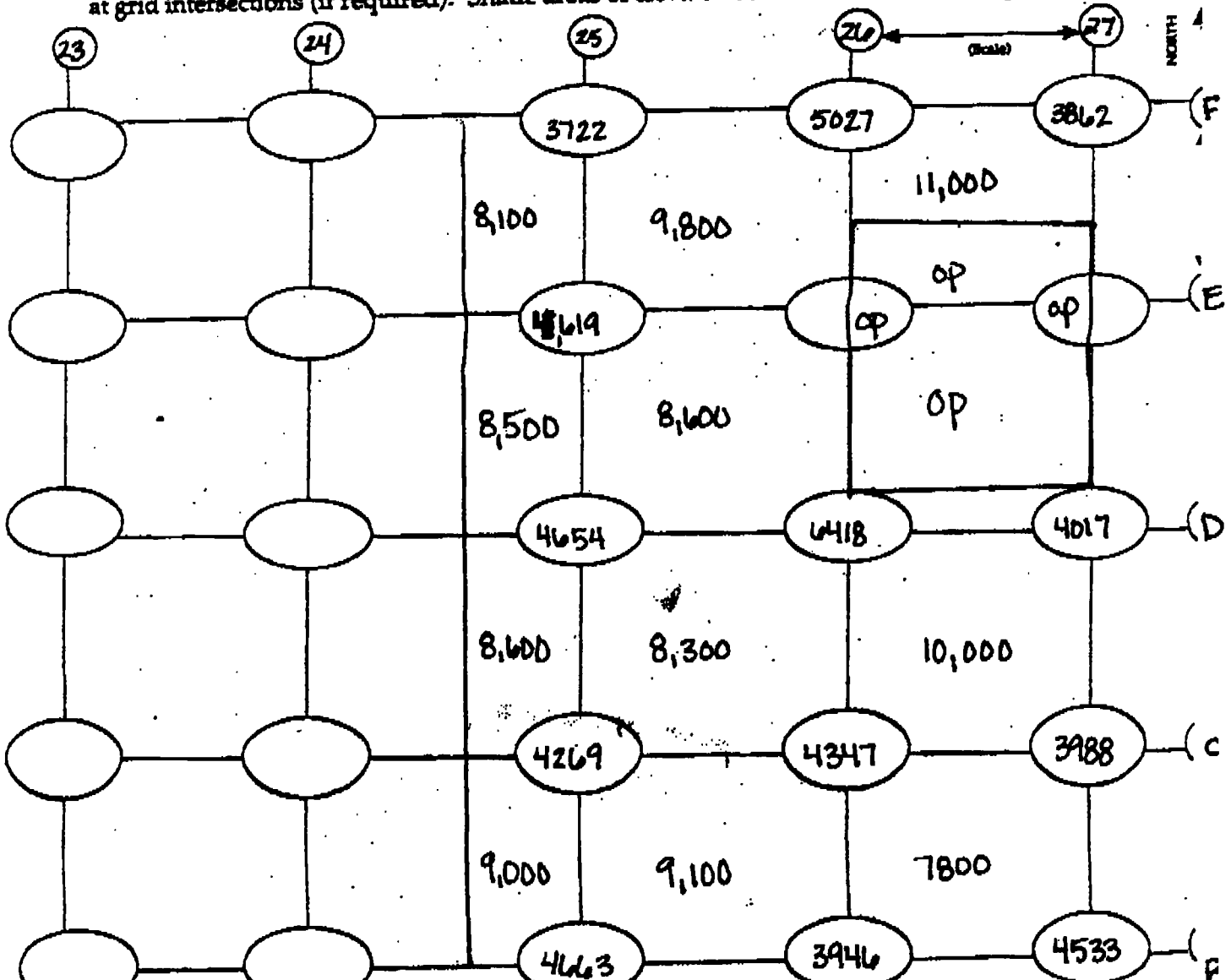
 Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/18, 9/19, 9/24Technician L. AschimInst. Model Ludlum 2221
 Meter # Probe 38
 Serial No. 127242 148144

 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation SurfaceBackground 5-6 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 * = Exclusion zone boundary NE = Not excavated SL = Slope



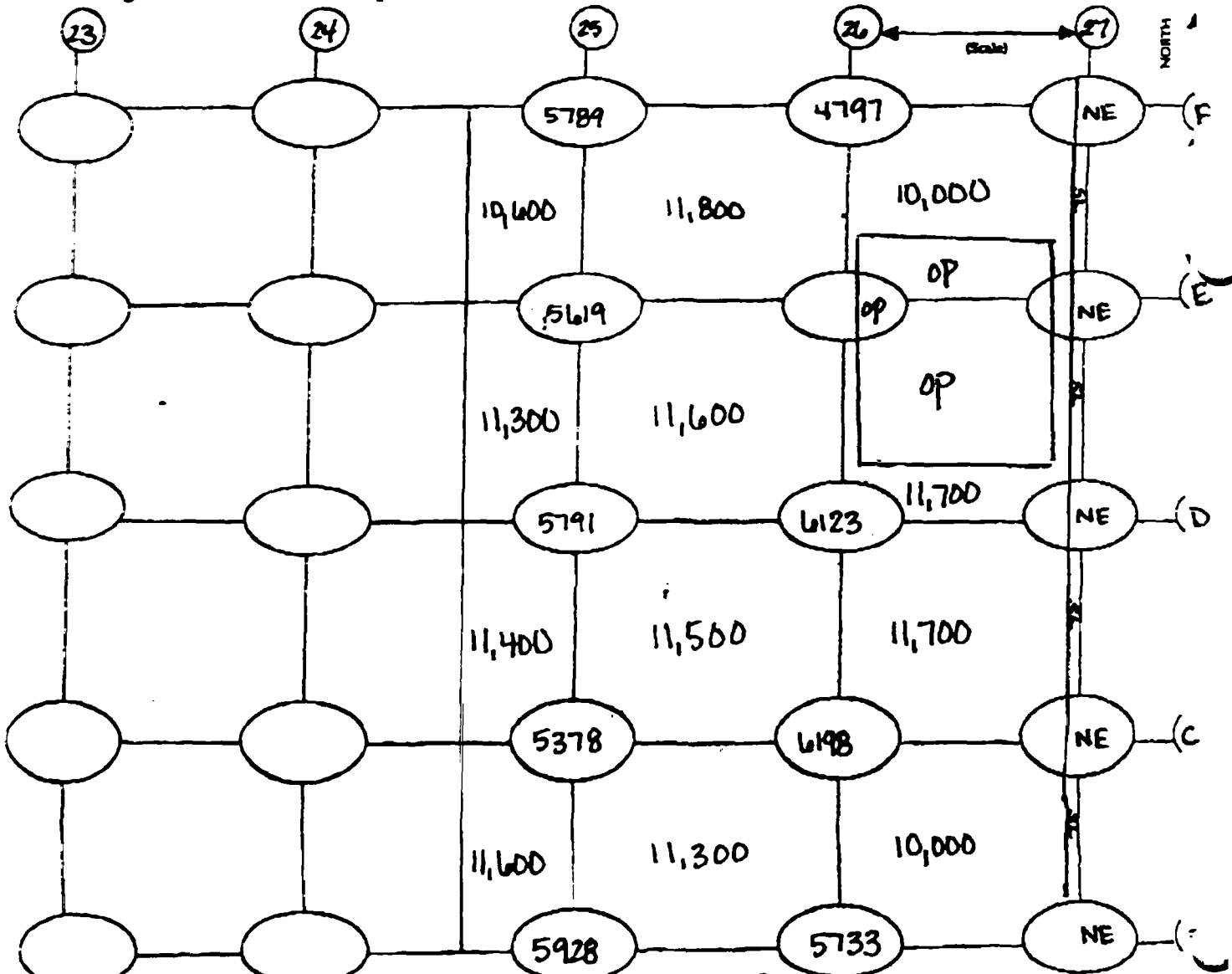
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants Ltd.

Date 9/18, 9/19, 9/24Technician L. AschinkInst. Model Ludlum 2221meter # 1168144 Probe # 1168144Serial No. 127242Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 5-6 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, Omer Pass
 * - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6

STS Consultants, Ltd.

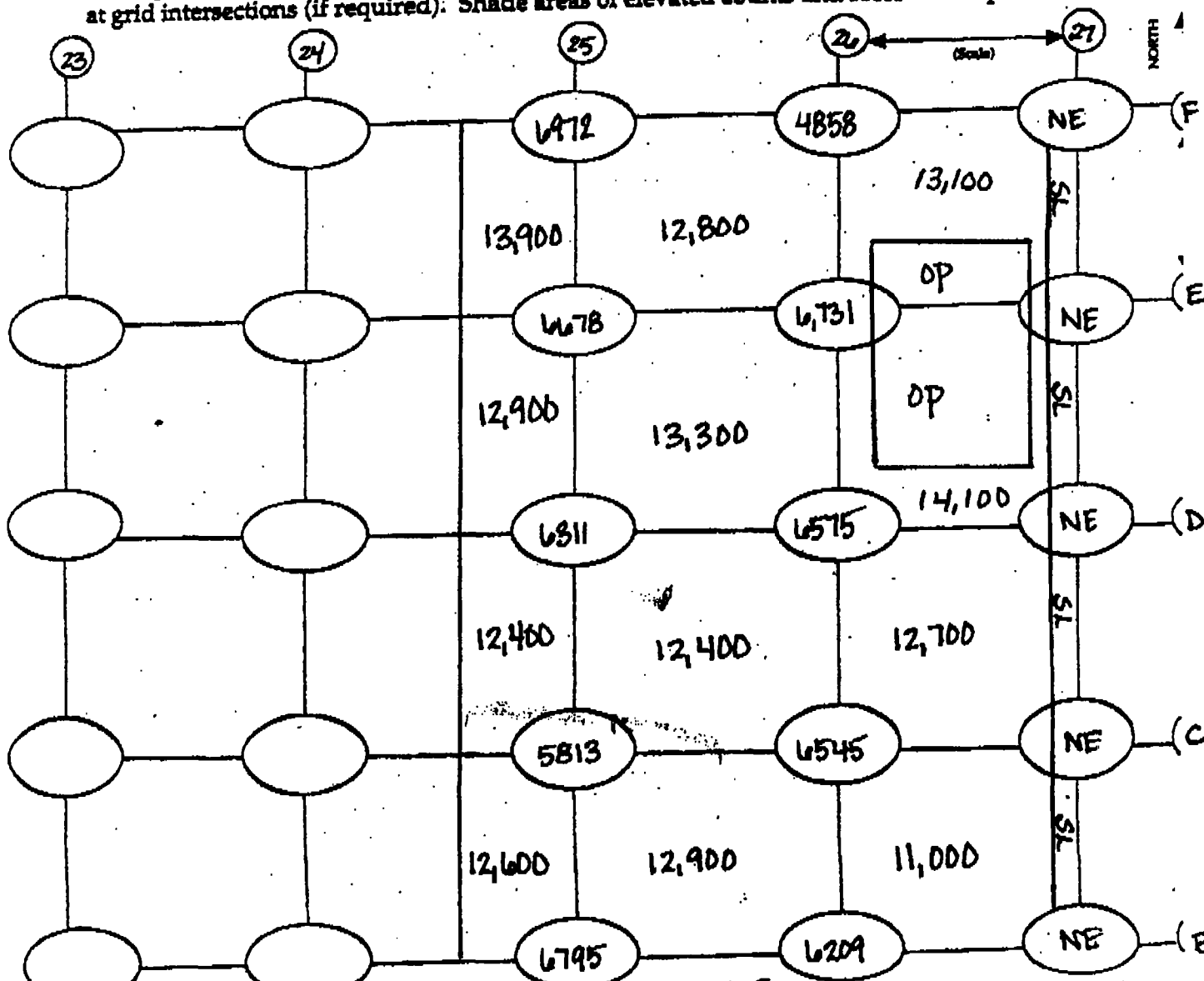
Date 9/18, 9/19, 9/24Technician L. Aschiri

meter #

Probe #

Inst. Model Ludlum 2221Serial No. 127242No. B144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3Background 5-6 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Face
 * = Exclusion zone boundary NE = Not excavated SL = Slope



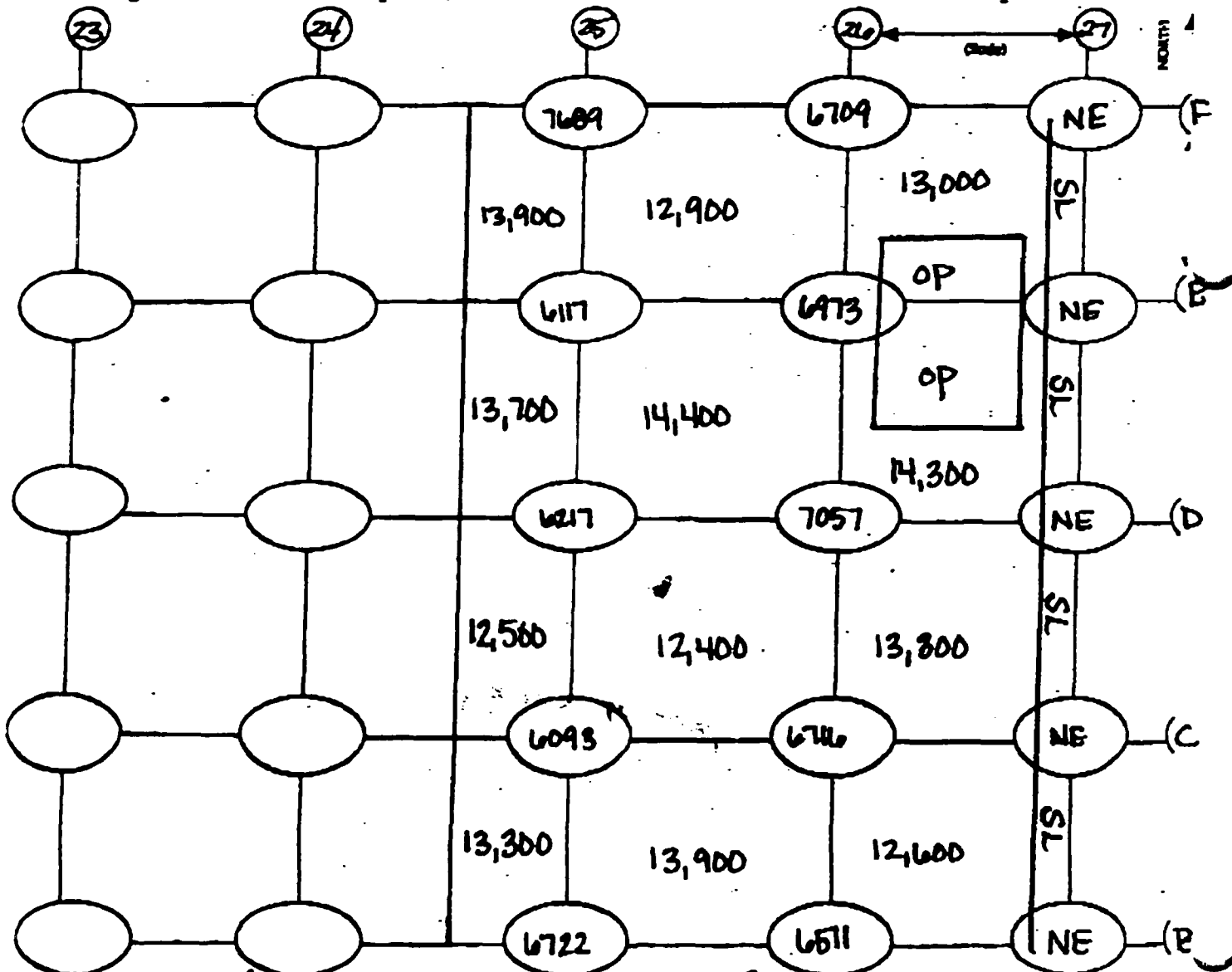
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Corporation, Ltd.

Date 9/18, 9/19, 9/24Technician L. Aschim
meter # 118844 Probe # 118844Inst. Model Ludlum 2221Serial No. 127242Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5Background 5-6k cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Page
☒ Exclusion zone boundary NE: Not excavated SL: Slope



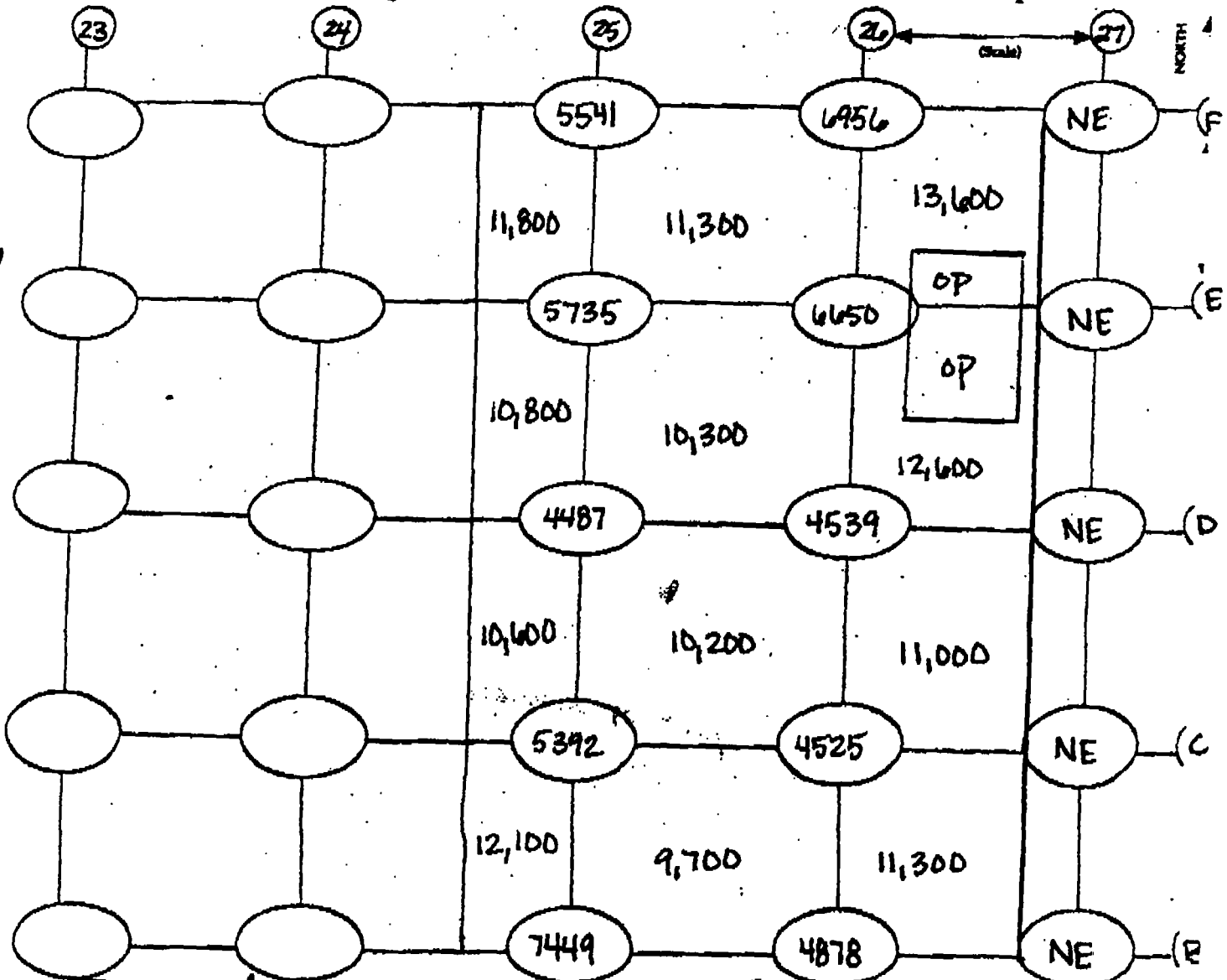
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 5 of 6

STS Consultants, Ltd.

Date 9/18, 9/19, 9/24Technician L. AschimiInst. Model Ludlum 2221Serial No. 127242Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -6Background 5-6 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP Overexposed
 ** = Exclusion zone boundary NE = Not excavated SL = Slope



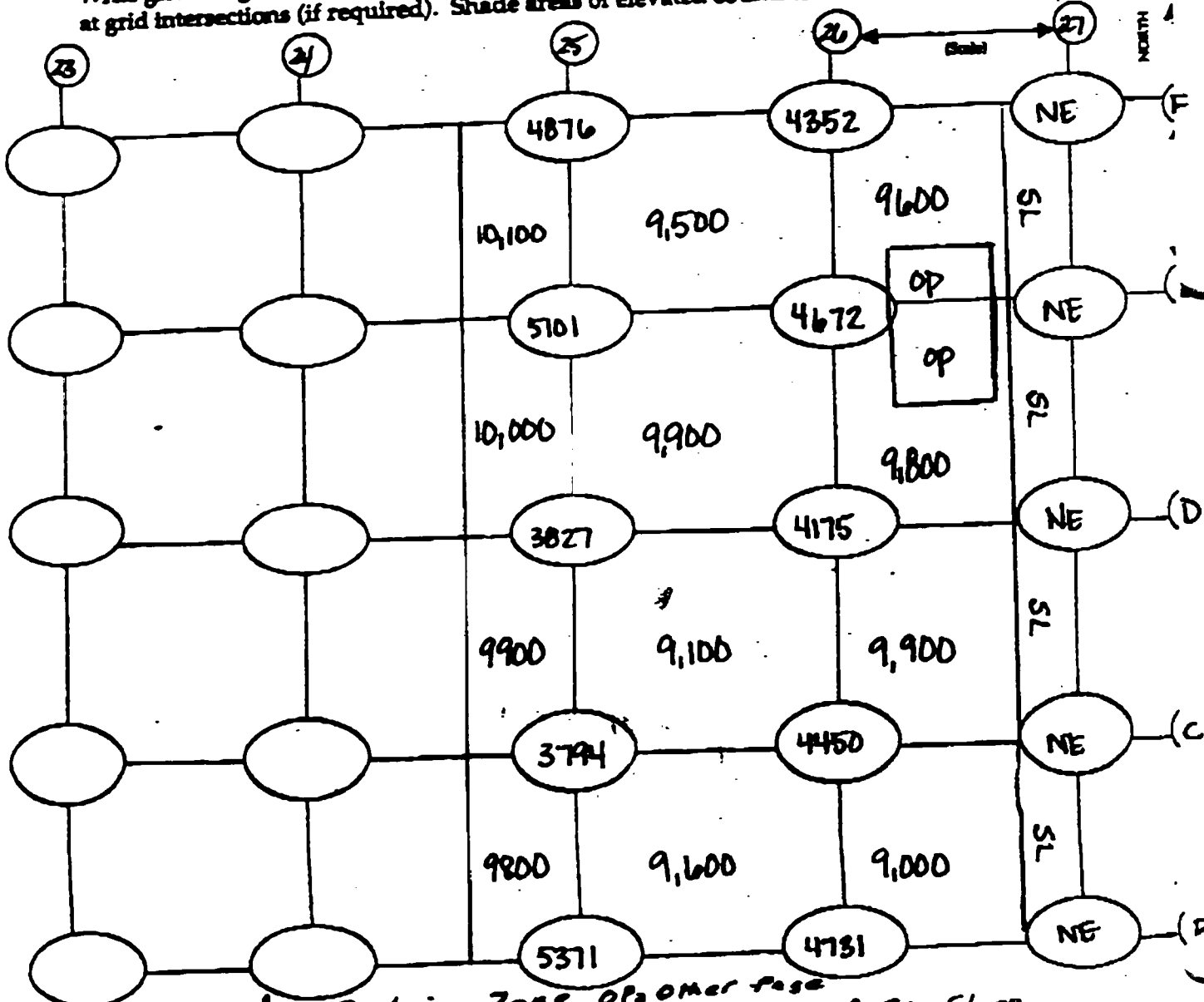
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/18, 9/19, 9/24Technician L. AsehimSerial No. 127242 / 12844Inst. Model Ludlum 2221Lift Elevation -7Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 5-1.6K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone op. Other case
 * - Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STB Consultants, Ltd.

Date 9/19/02

Technician Aschim

Inst. Model Ludlum 2221

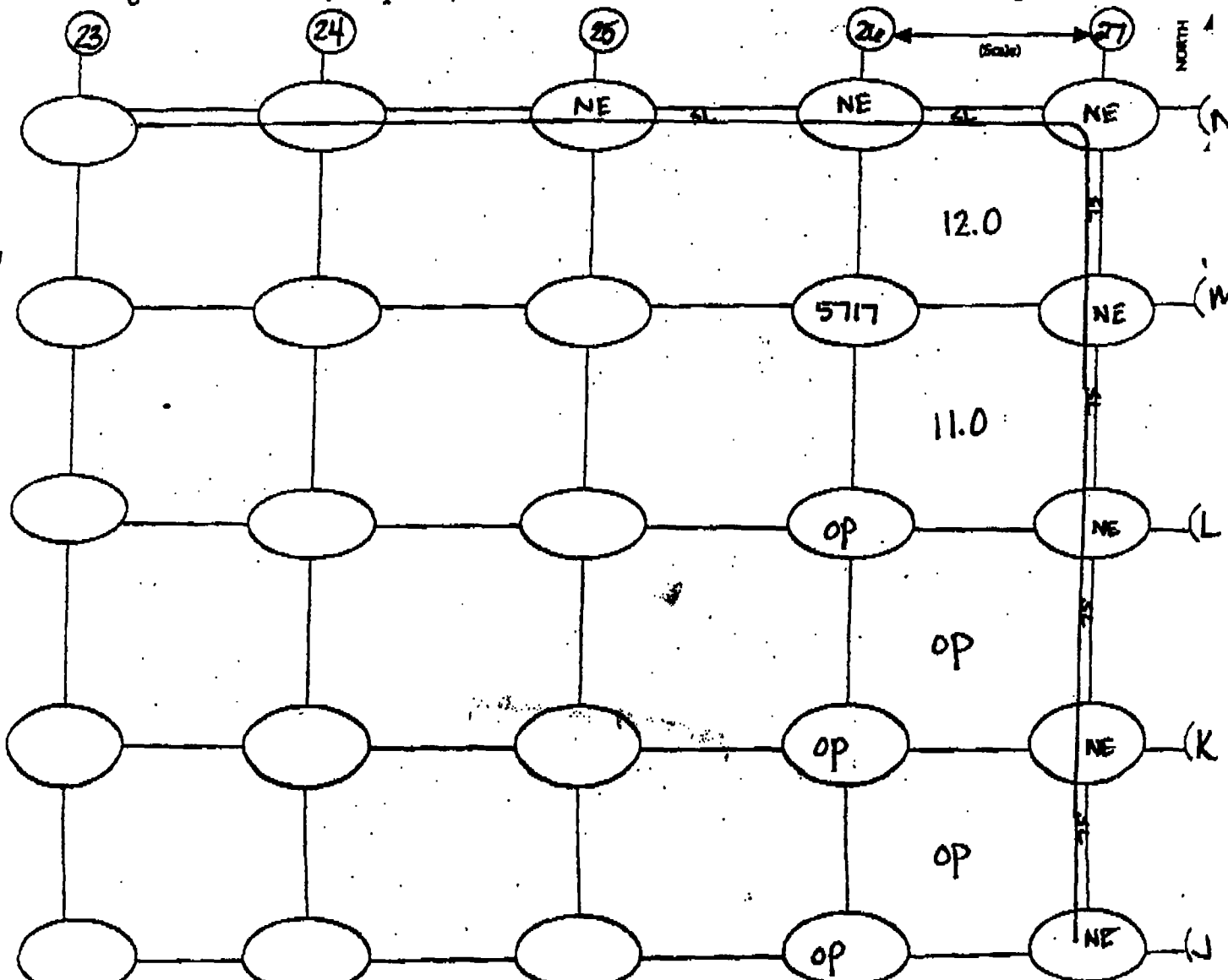
meter #	Probe #
Serial No. 27242	168144

Probe Type:	1"x1" Nal / 2"x2" Nal
	Shielded / Not Shielded

Lift Elevation Surface

Background 410 K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other pass
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6

STS Consultants, Ltd.

Date

9/19/02

Technician

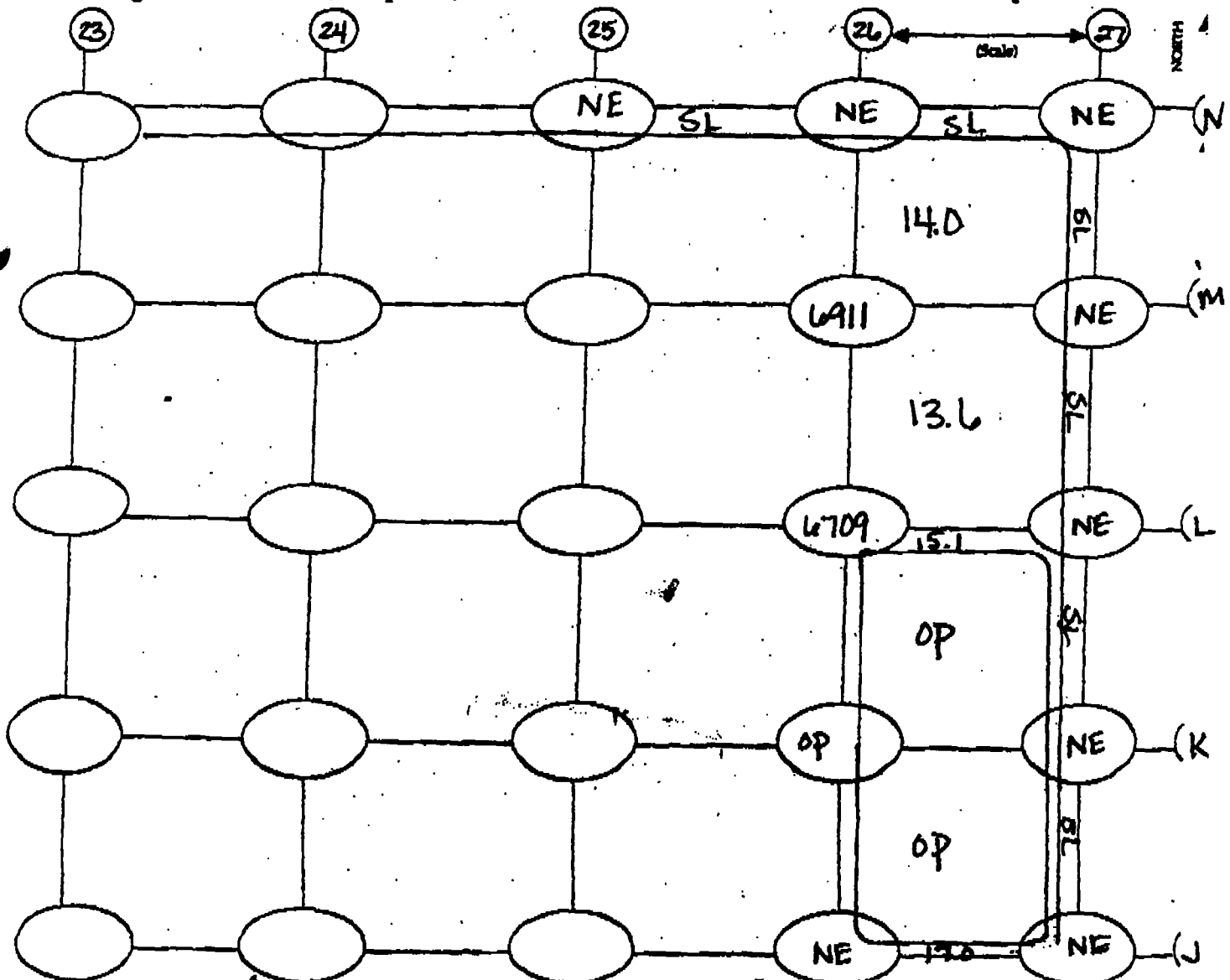
L. AschimInst. Model Ludlum 2221Serial No. 127242

meter #

Probe #

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3Background 4-10 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 * = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 10

STS Consultants, Ltd.

Date 9/19/02

Technician L. Aschim

Inst. Model Ludlum 2221

Serial No. 127242 / 1168144

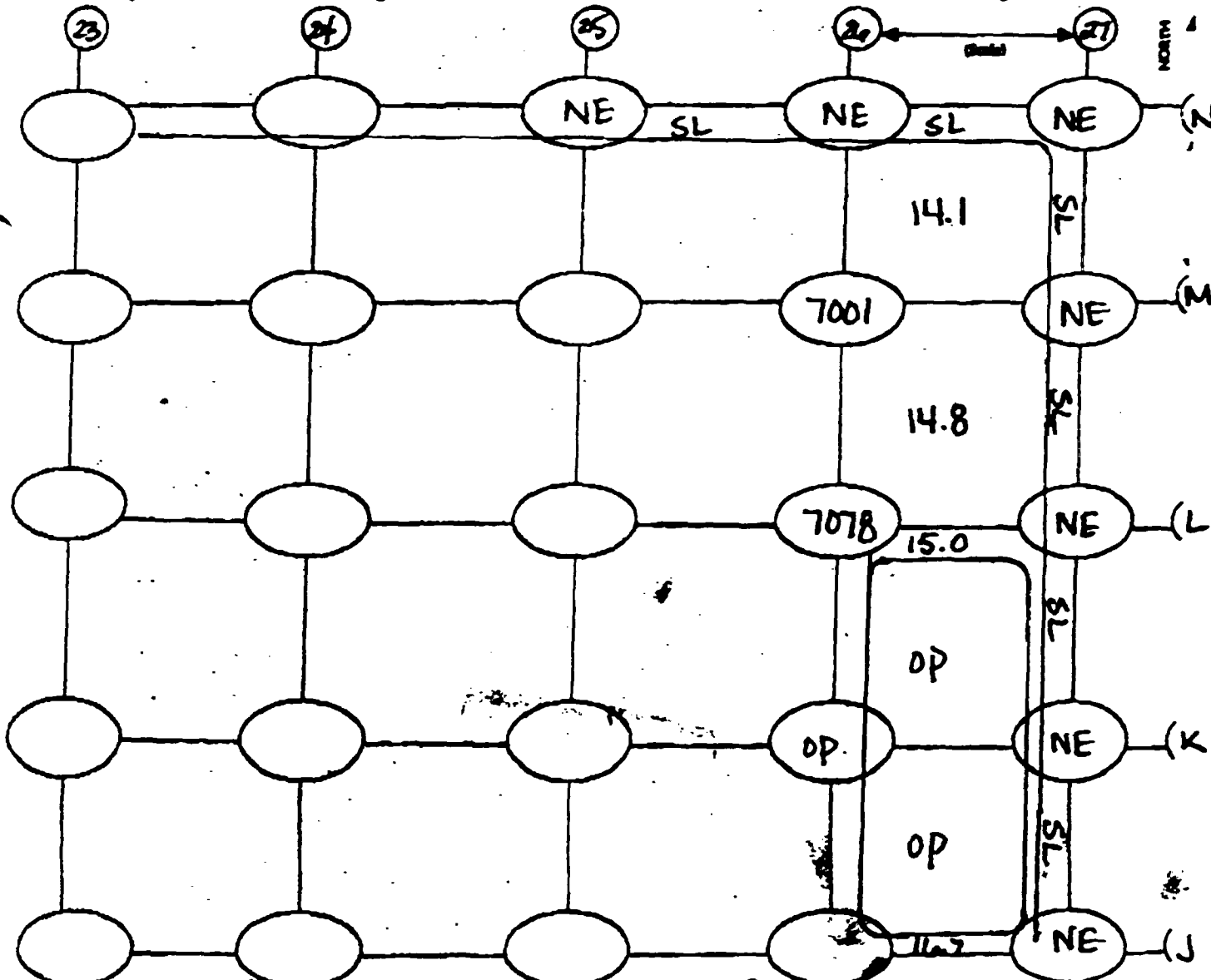
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5

Background 440K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary NE = Not excavated SL = Slope

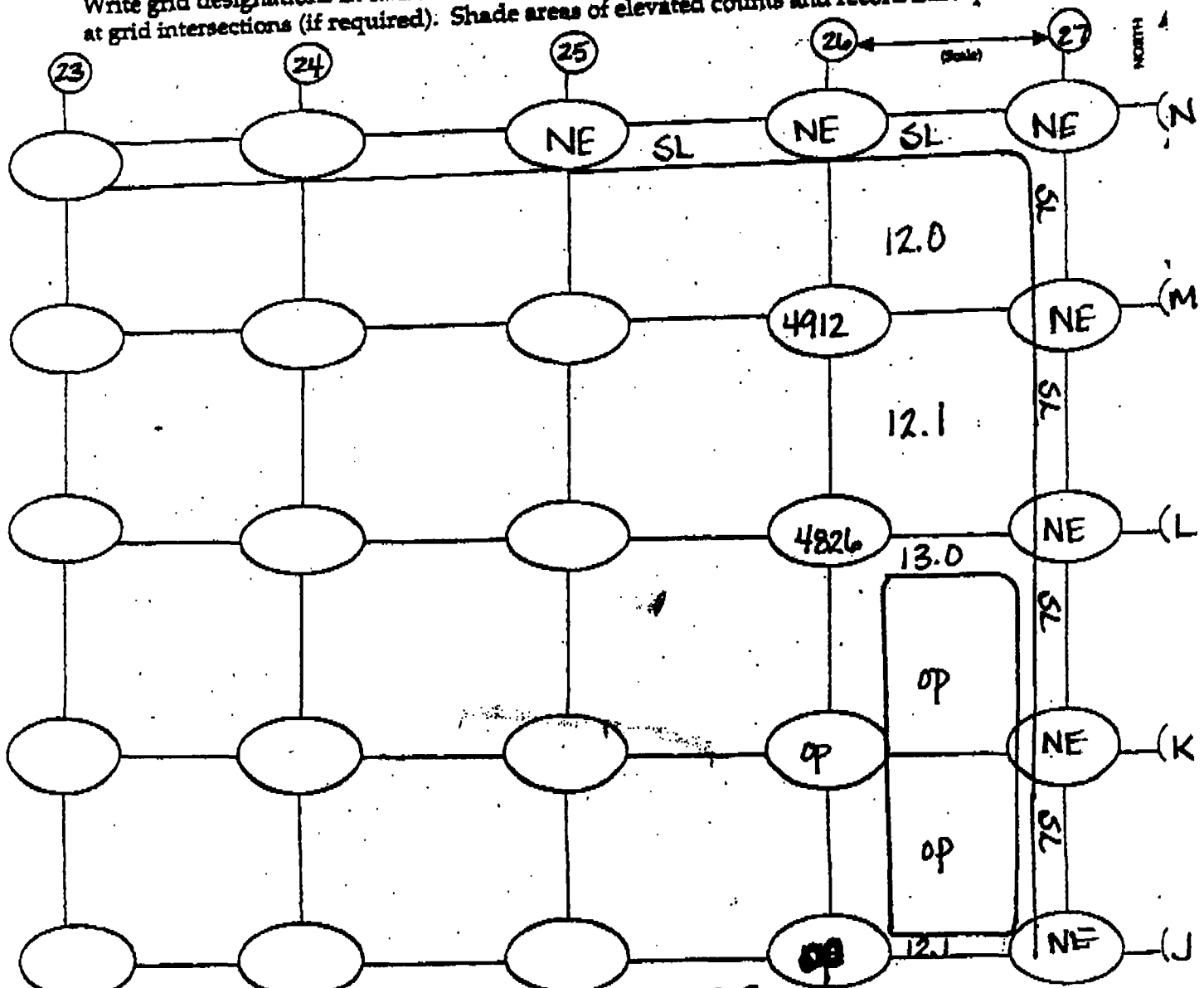


STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 5 of 6Date 9/19/02Technician L. Aschimmeter # 1168144Serial No. 127242Lift Elevation -6.0'Inst. Model Ludlum 2221Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedBackground 4-10 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone op = other face
 * = Exclusion zone boundary NE = Not excavated SL = Slope

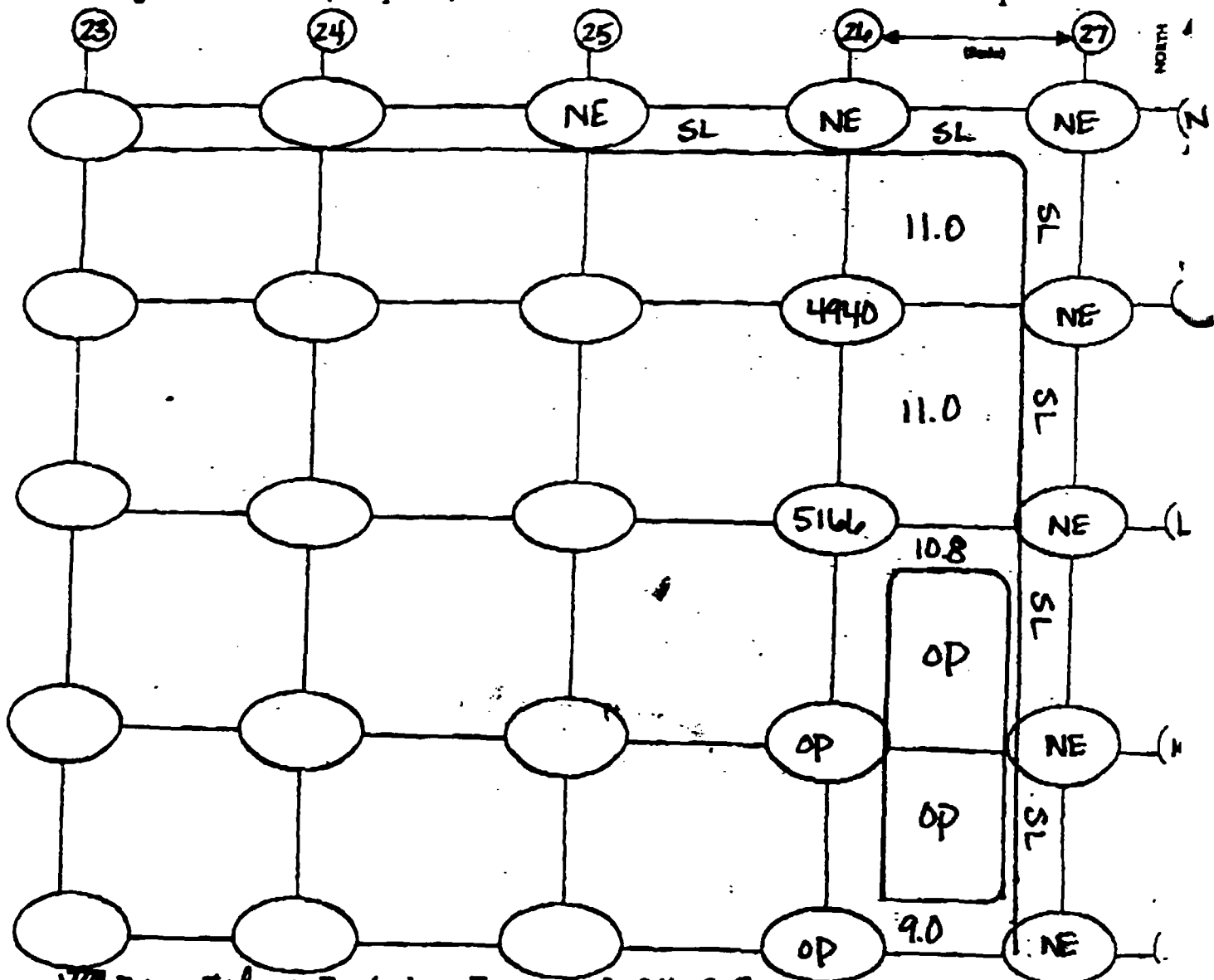


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 6 of 6Date 9/19/02Technician L. AschimInst. Model Ludlum 2221meter # 127242 Probe # 1168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5Background 4-10 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP: other page
 * = Exclusion zone boundary NE = Not exact SL = Slope

✓GAIH



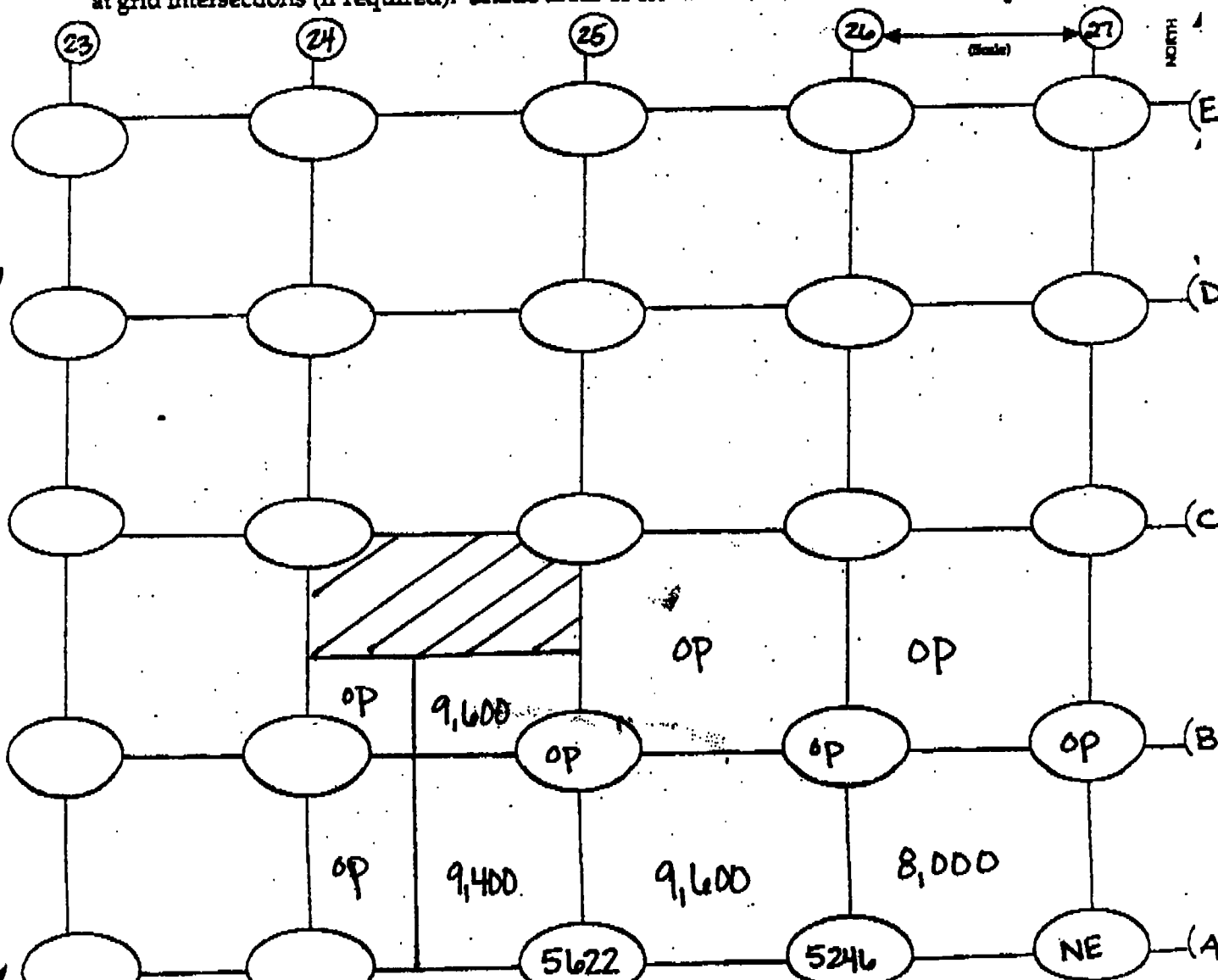
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L. AschimInst. Model Ludlum 2221Serial No. meter # / Probe #Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 5000 cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



/// Excavated as Exclusion Zone OP = Outer Perimeter
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



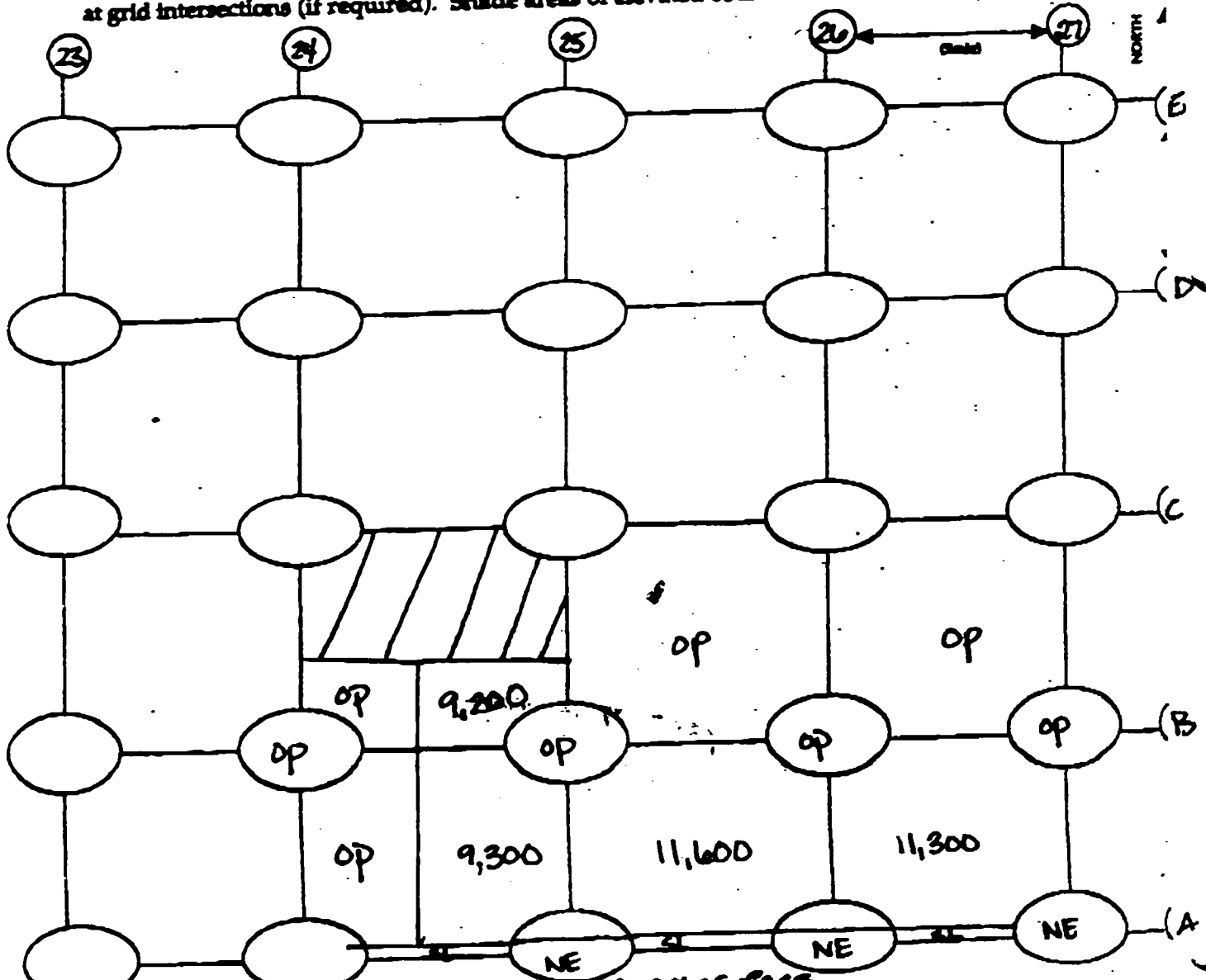
RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L. AschimInst Model Ludlum 2221Serial No. 127242 / 168144
 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation -1.5'Background 5000 cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Pass
 - Exclusion zone boundary NE = Not excavated SL = Slope



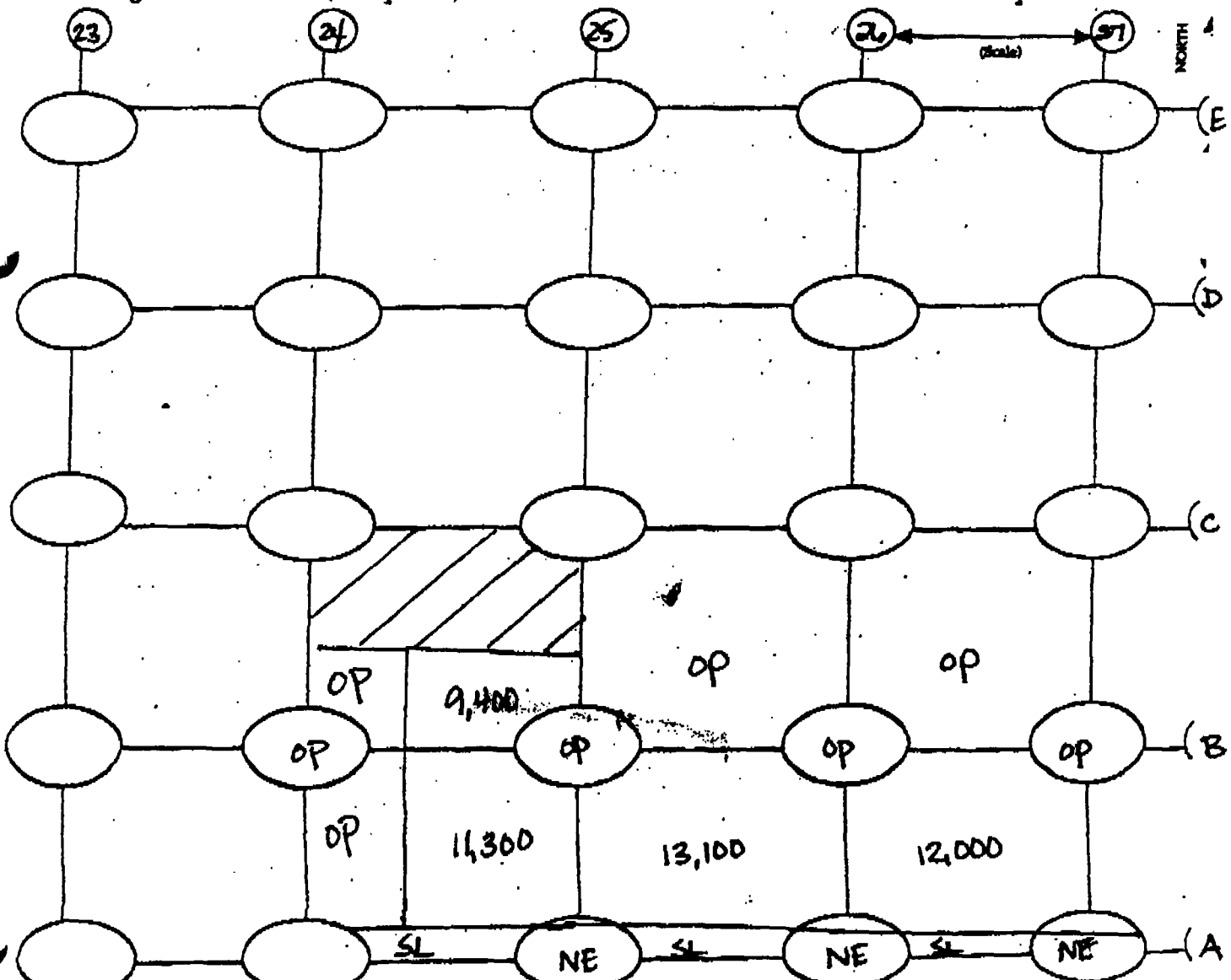
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L. AsehimInst. Model Ludlum 2221meter # 127242 Probe # 168144
Serial No.Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 5000 cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 SL = Exclusion zone boundary NE = Not excavated SL = Slope



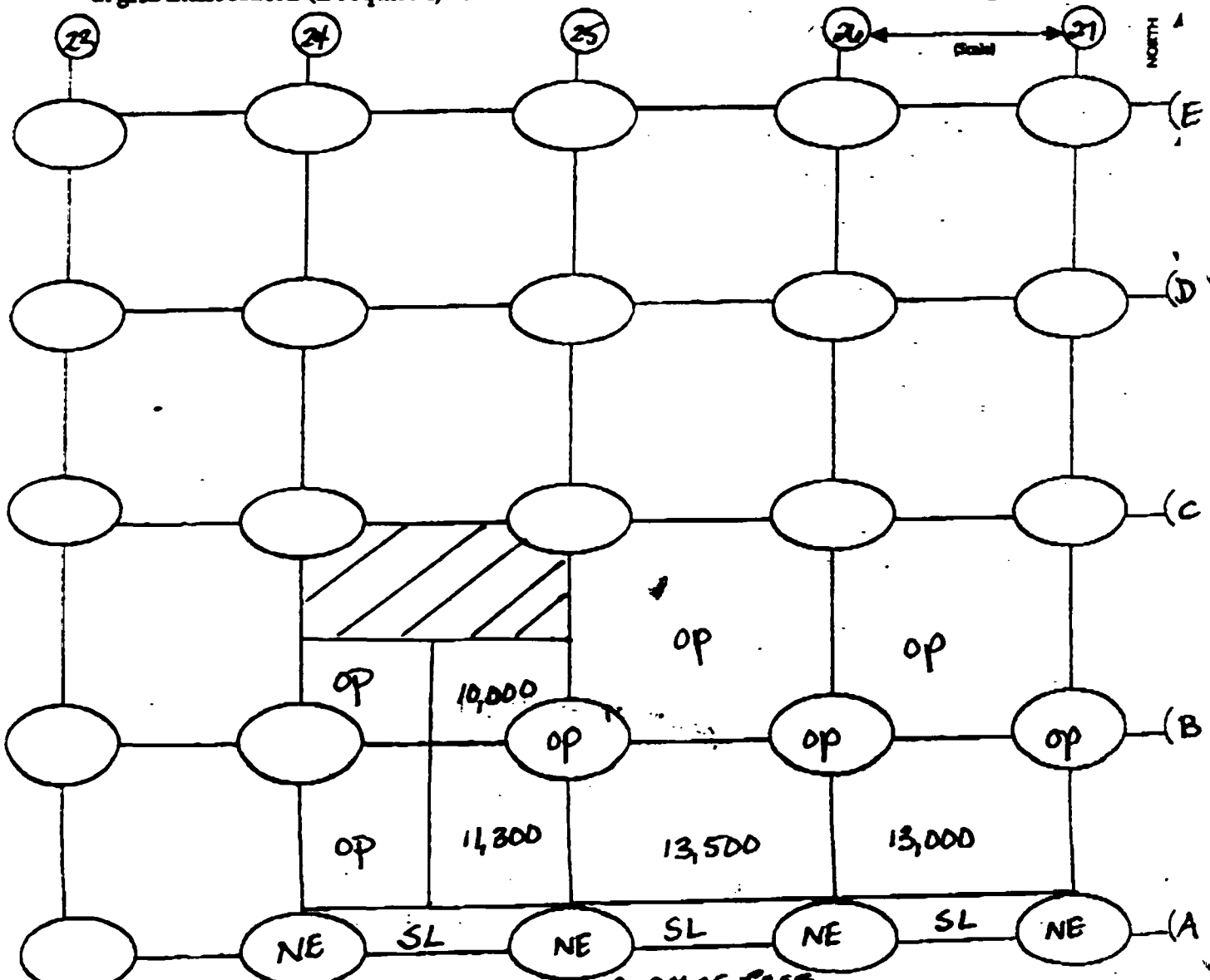
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L AschimInst. Model Ludlum 2221Serial No. 127242 / 1168144Probe Type: 1'x1' NaI / 2'x2' NaI
Shielded / Not ShieldedLift Elevation -4.5Background 5000 cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone op = Other Page
 Exclusion zone boundary NE = Not excluded SL = Slope



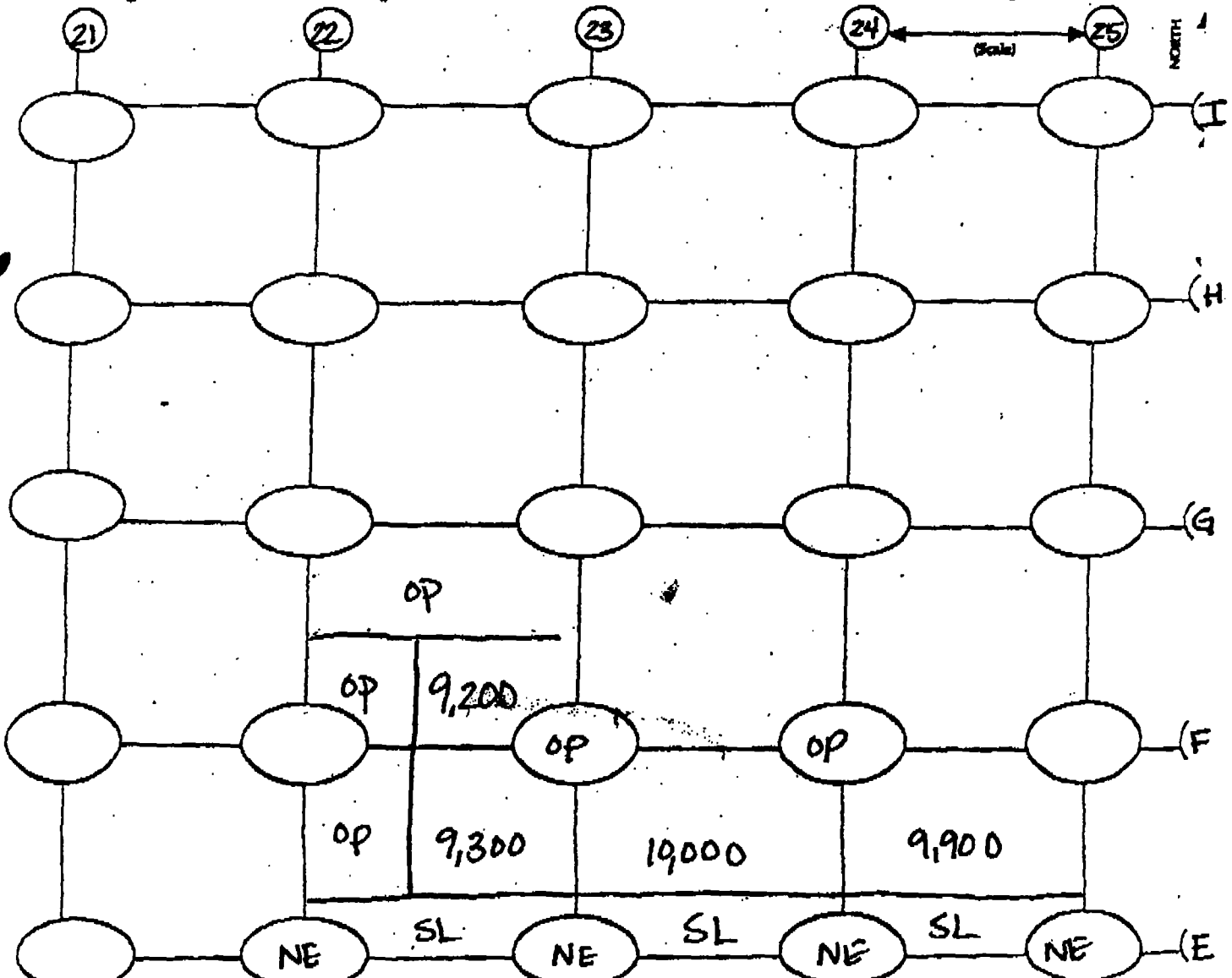
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L. AschirnInst. Model Ludlum 2221Serial No. meter # 127242 / Probe # 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5Background 5,000 cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



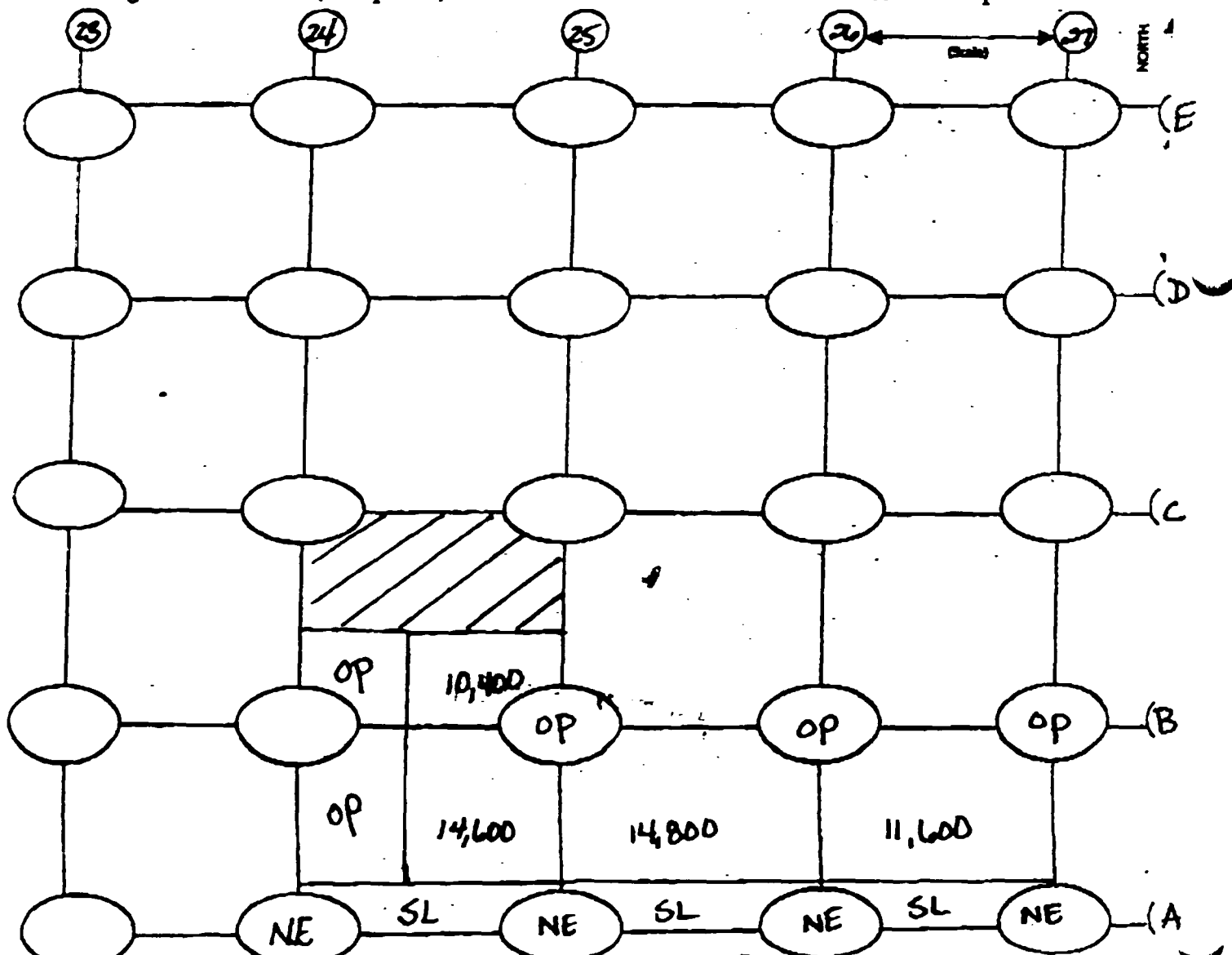
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/20/02Technician L. AschimInst Model Ludlum 2221Serial No. 127242 / 1168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 5000 cpmAction Level 21,012 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Shaded area as Exclusion Zone OP = Over Pass
 * = Exclusion zone boundary NE = Not excavated SL = Slope



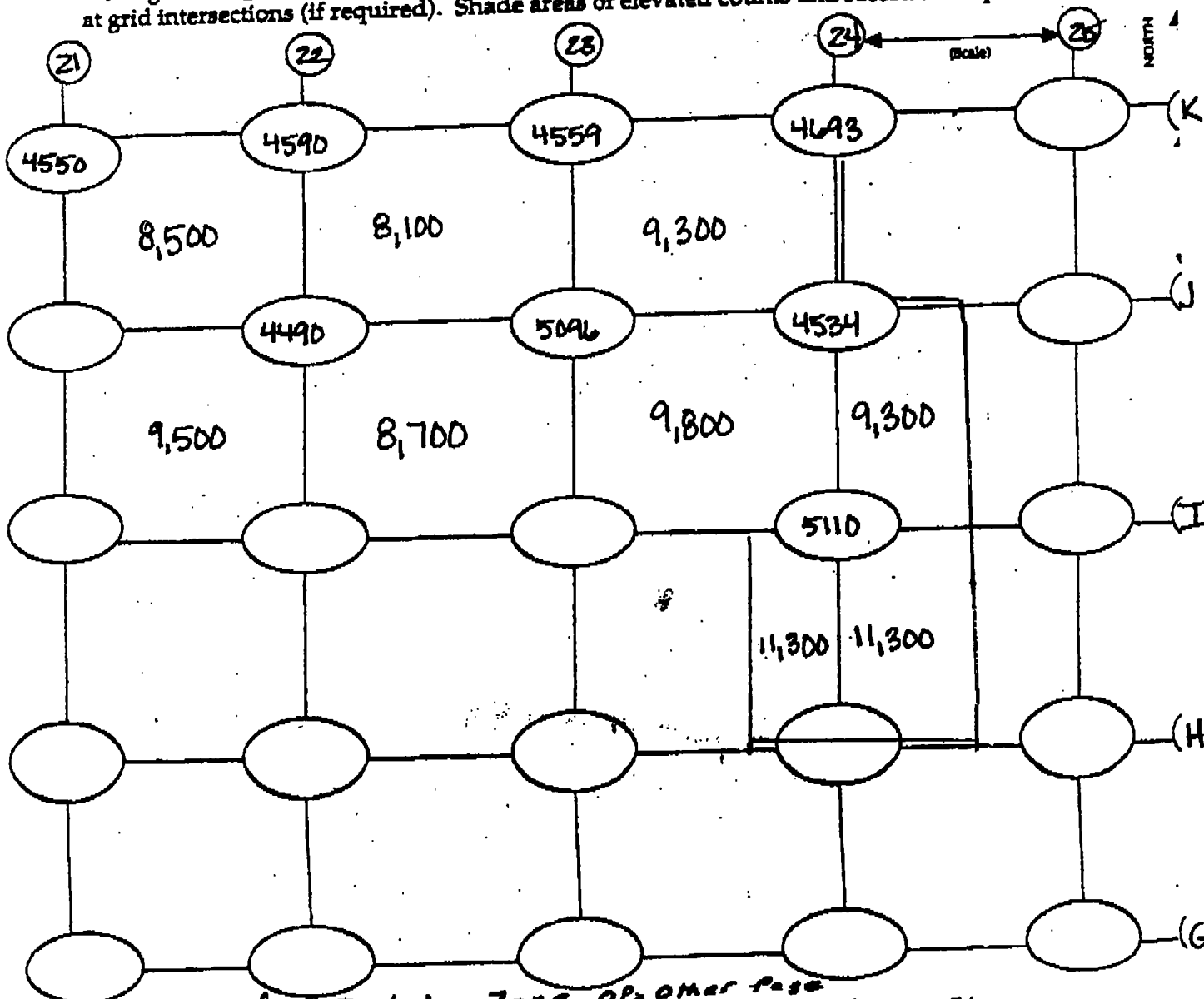
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/23/2002 & 9/25/02Technician Lindsay Aschim
meter # Probe #Inst. Model Ludlum 2221Serial No. 127242 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 7-8 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



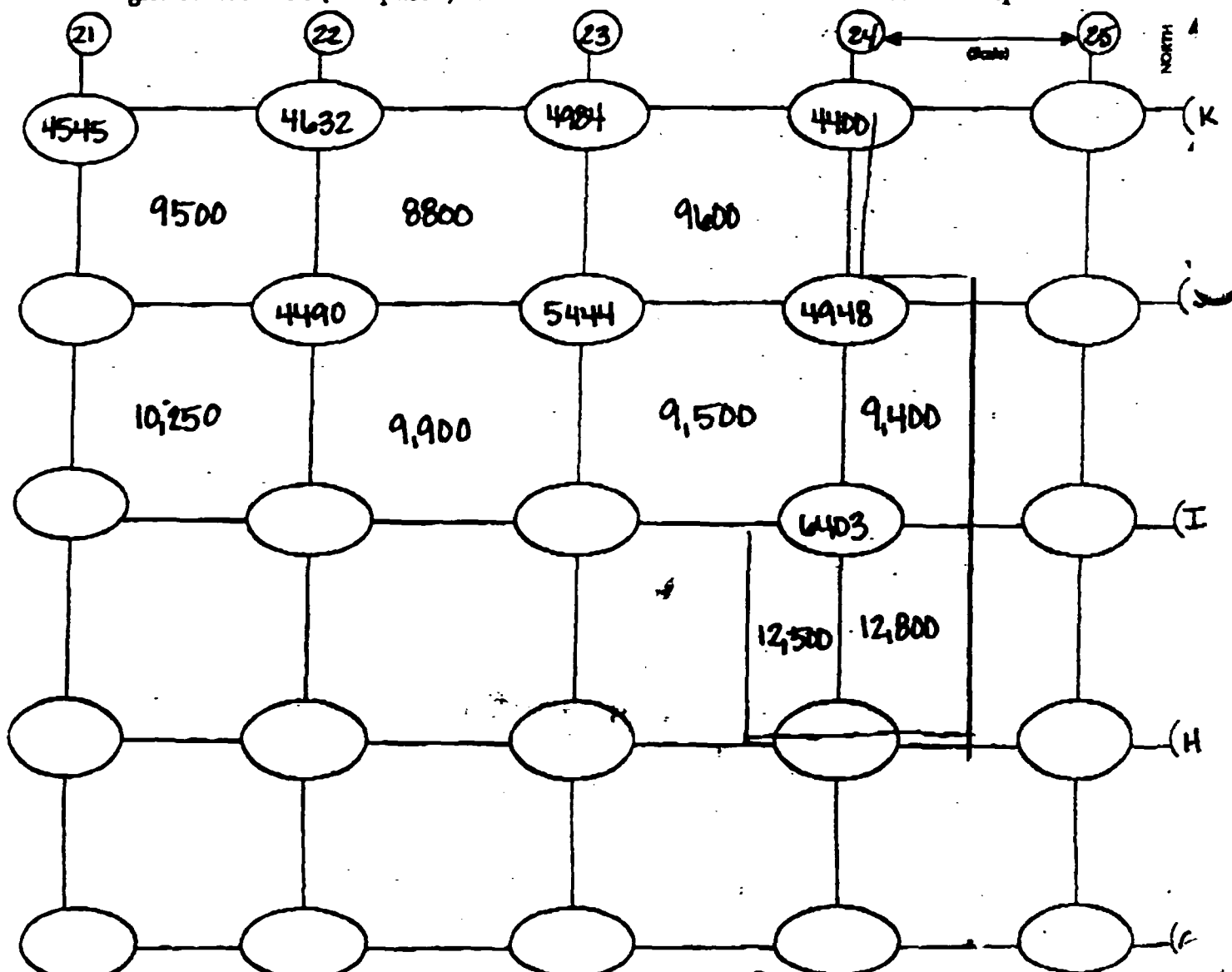
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 4

STS Consultants, Ltd.

Date 9/23/2002 & 9/25/02Technician Lindsay AschimInst. Model Ludlum 2221Serial No. 127242 / 116844Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 7-8 K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone on other page
 * - Exclusion zone boundary NE = Not excluded SL = Slope



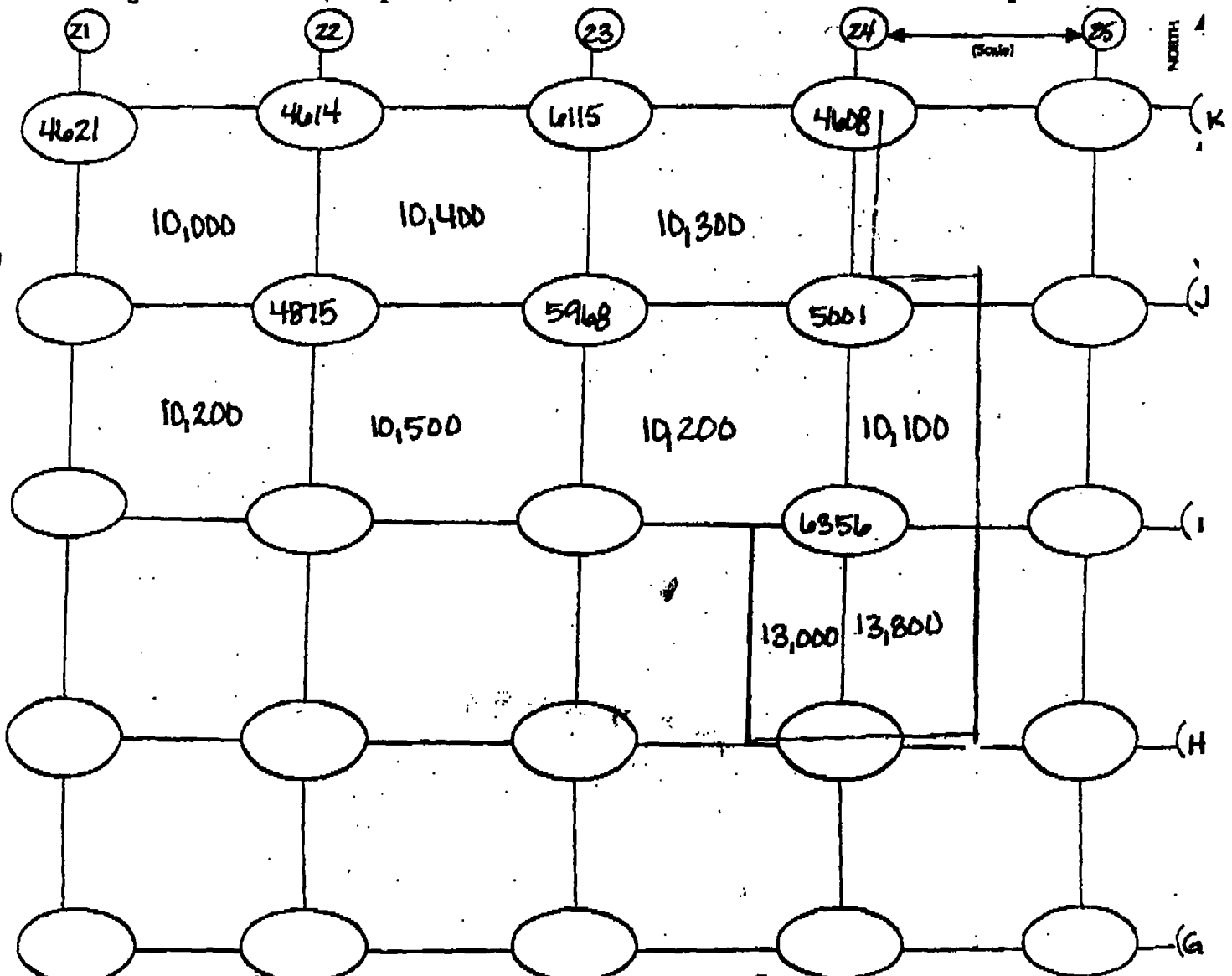
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/23/2002 & 9/25/02Technician L. AschimInst. Model Ludlum 2221meter # Probe 33
Serial No. 127242 1108144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3Background 7-8K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone or other use
 ** = Exclusion zone boundary NE = Not excavated SL = Slope



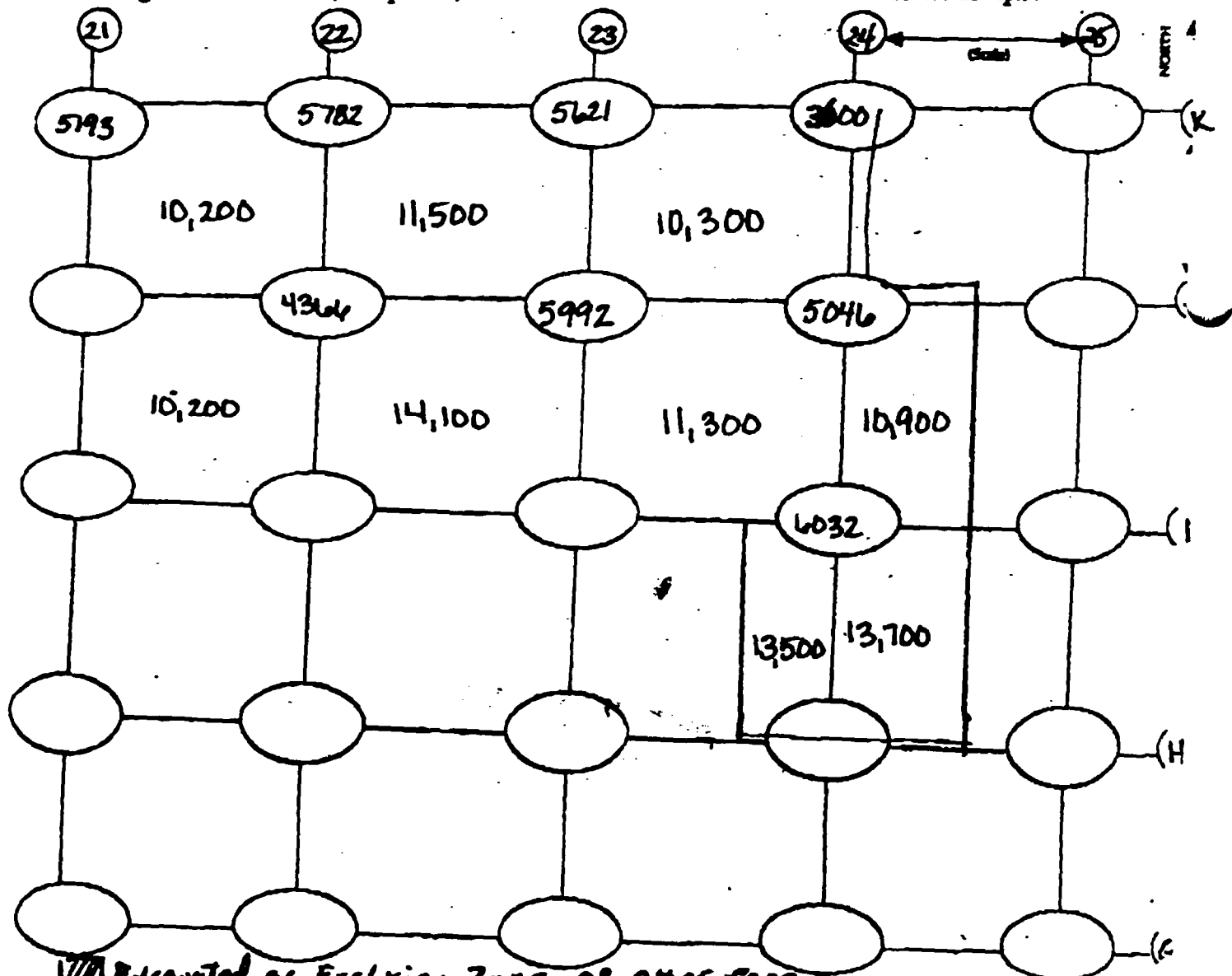
RADIATION SURVEY FORM

Project # 25585-KI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/23/2002 19/25/02Technician L. AschimInst. Model Ludlum 2221meter # 127242 Probe # 1168144Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5Background 7-8 K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone or other use
 * = Exclusion zone boundary NE = Not excluded SL = Slope



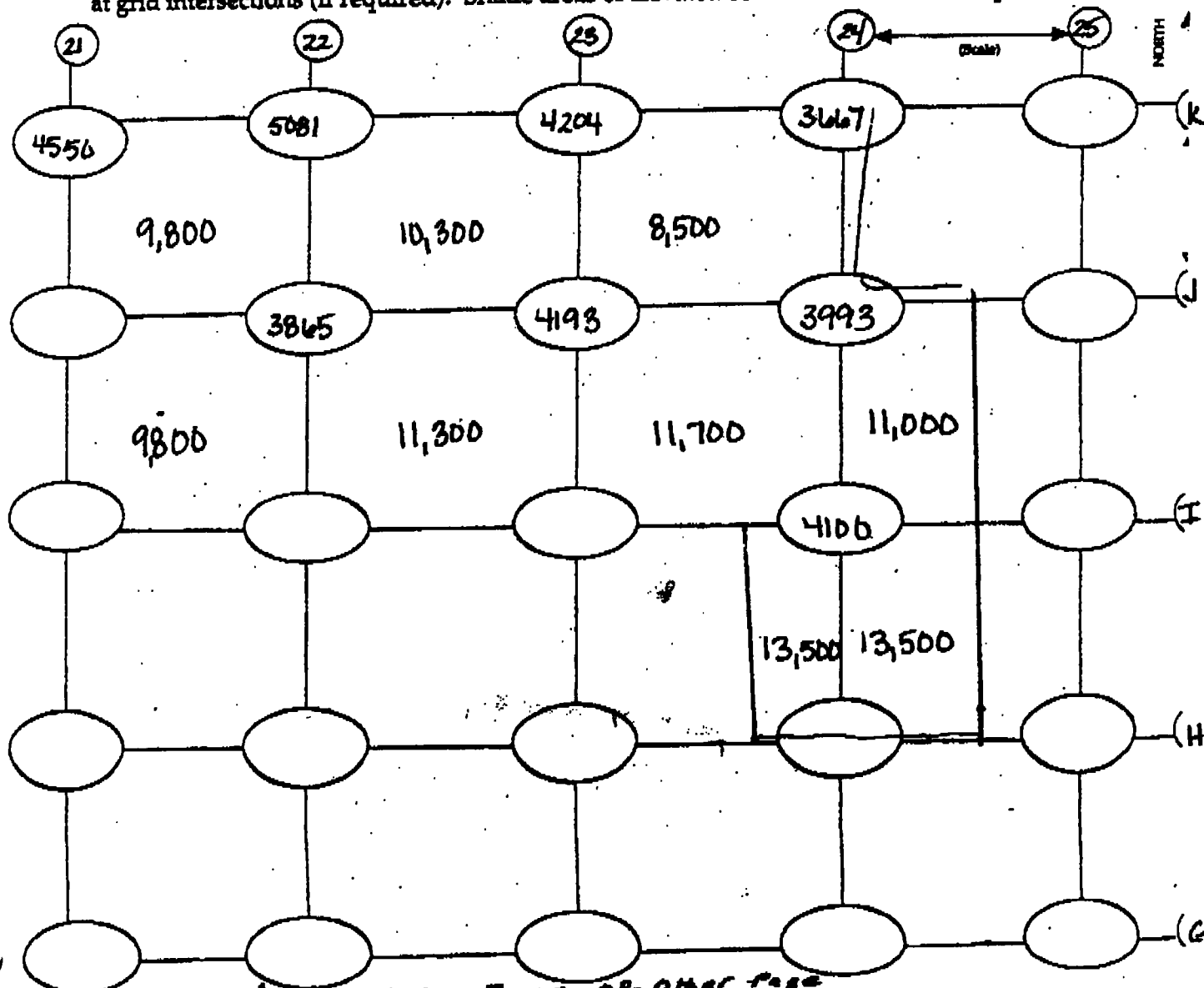
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 5 of 6

STS Consultants, Ltd.

Date 9/23/2002 & 9/25/02Technician L. AschimInst. Model Ludlum 2221Serial No. 127242 / 160144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6Background 7-BK cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other face
 * * = Exclusion zone boundary NE = Not excavated SL = Slope



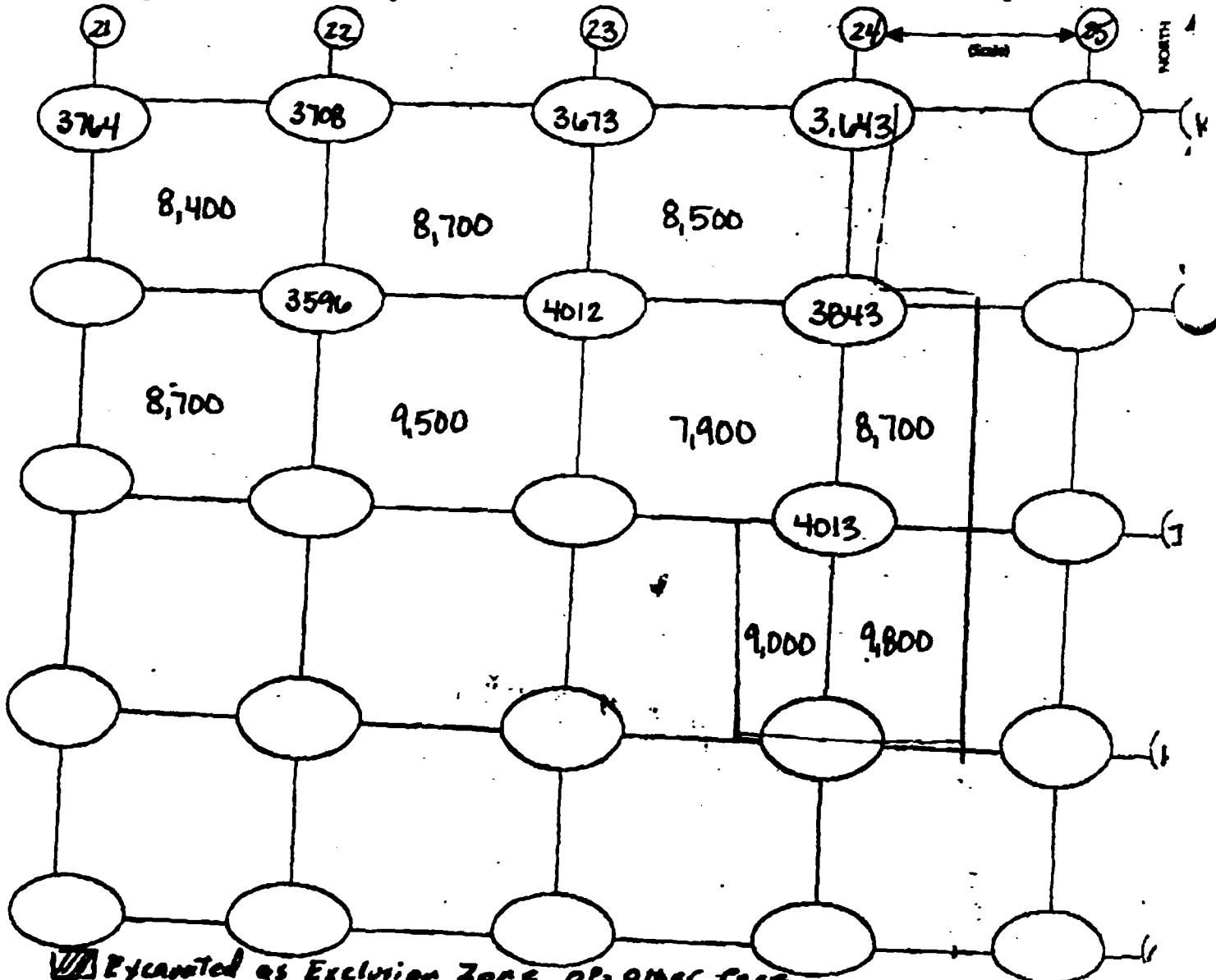
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1e of 1e

STS Consultants, Ltd.

Date 9/23/2002 & 9/05/02Technician L. AschimInst. Model Ludlum 2221meter # 127242 Probe # 16A144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5Background 78K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone on other page
 * = Exclusion zone boundary NE = Not excavated SL = Slope

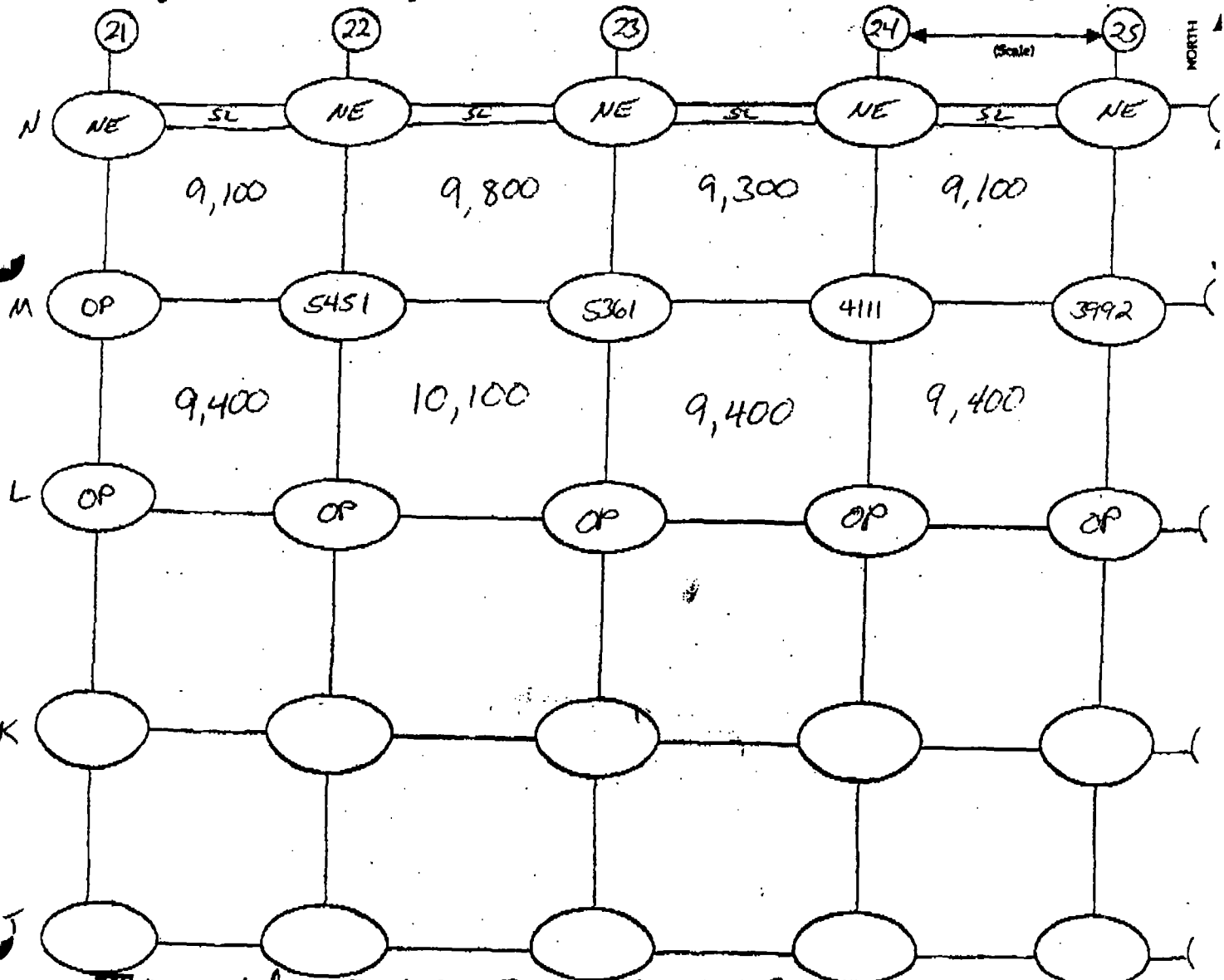


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 1 of 6Date 9/19/02 / 9/23/02Technician Jerry KrausInst. Model Ludlum 2221Meter # 132844 Probe # 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 4K - 6K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
--- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 9/19/02 / 9/23/02

Technician Serry Krause

Inst. Model Ludlum 2221

Serial No. 132844 / 168748

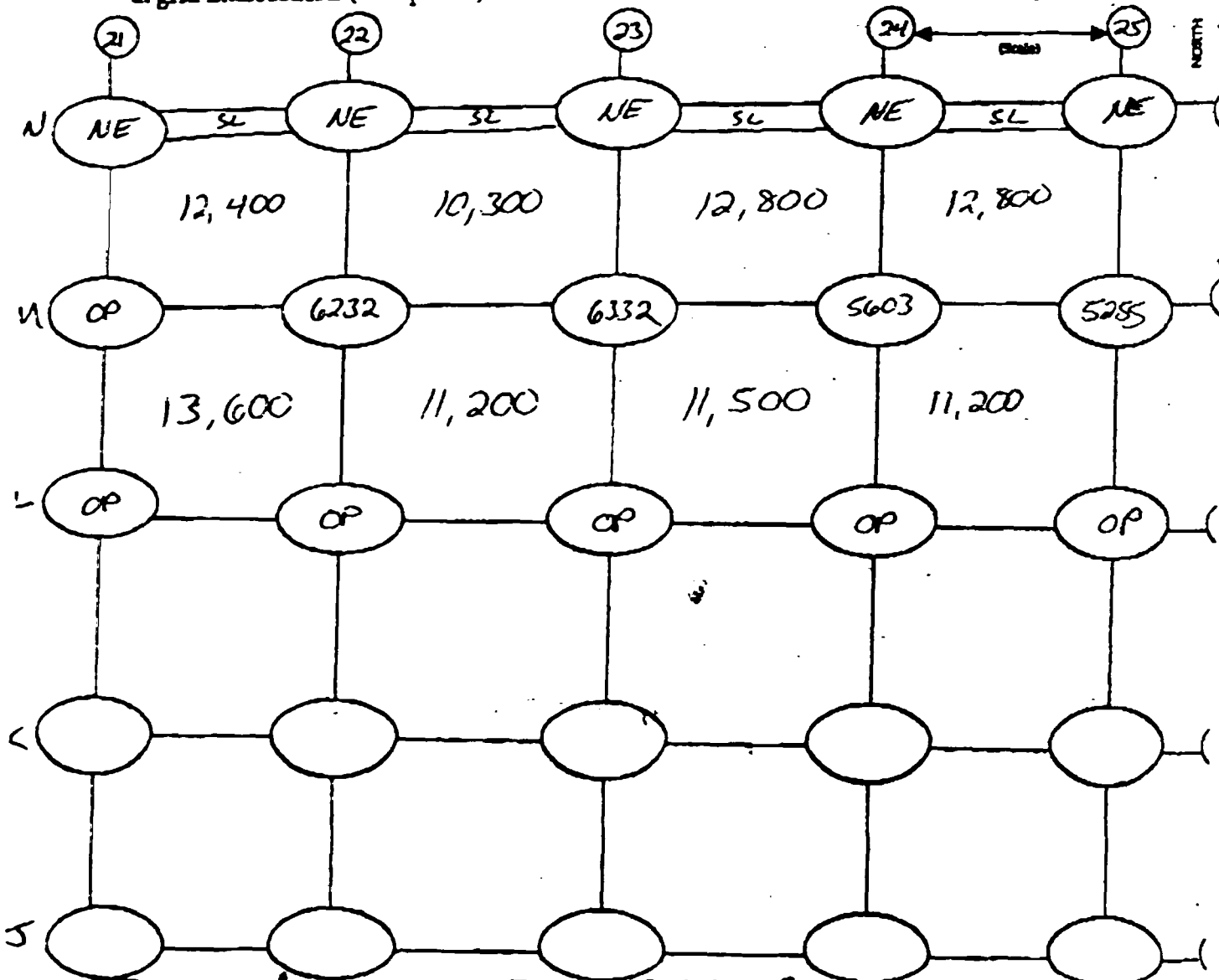
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 4k - 6k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other phase
- - - - - exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 6

STS Consultants, Ltd.

Date

9/19/02 / 9/23/02

Technician

Jerry Kraus

Inst. Model

Ludlum 2221

Serial No.

meter # 132844

Probe # 168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation

-3.0'

Background

4K - 6K

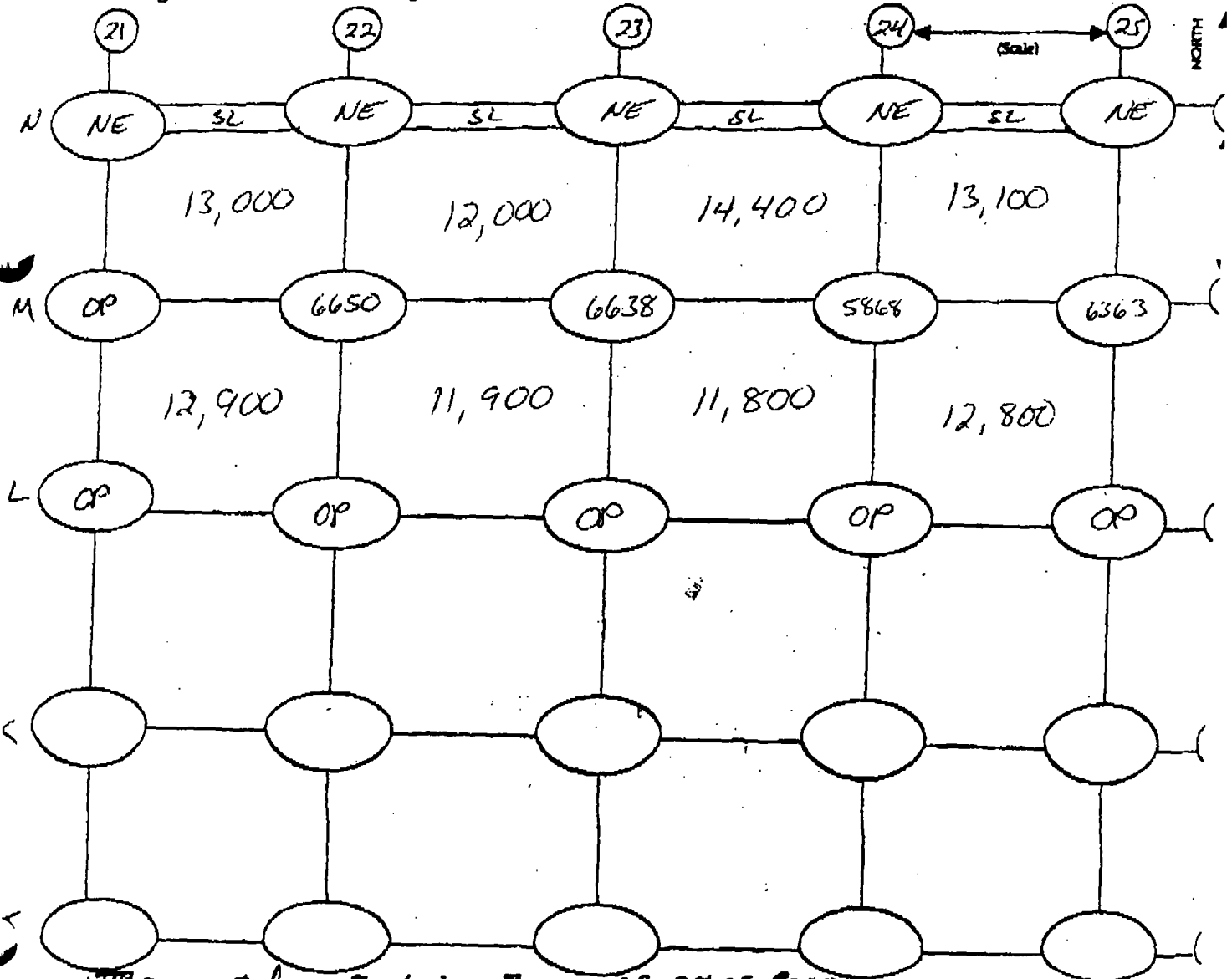
cpm

Action Level

20,909

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other area
- - - - - exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/19/02 / 9/23/02

Technician Jerry Kram

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

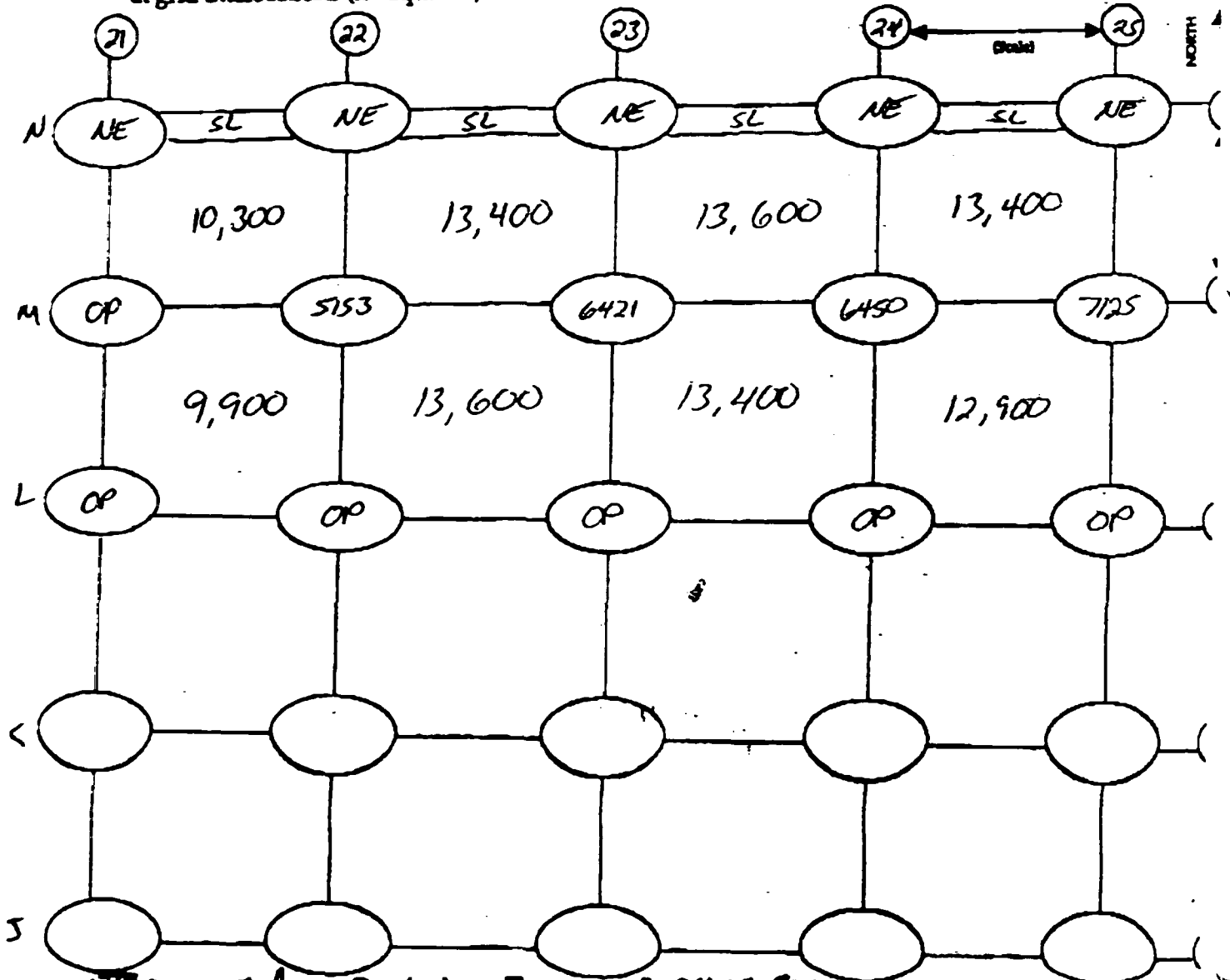
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 4k - 6k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP = Other Page
--- Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 6

Date 9/19/02 / 9/23/02

Technician Sony Kraus

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

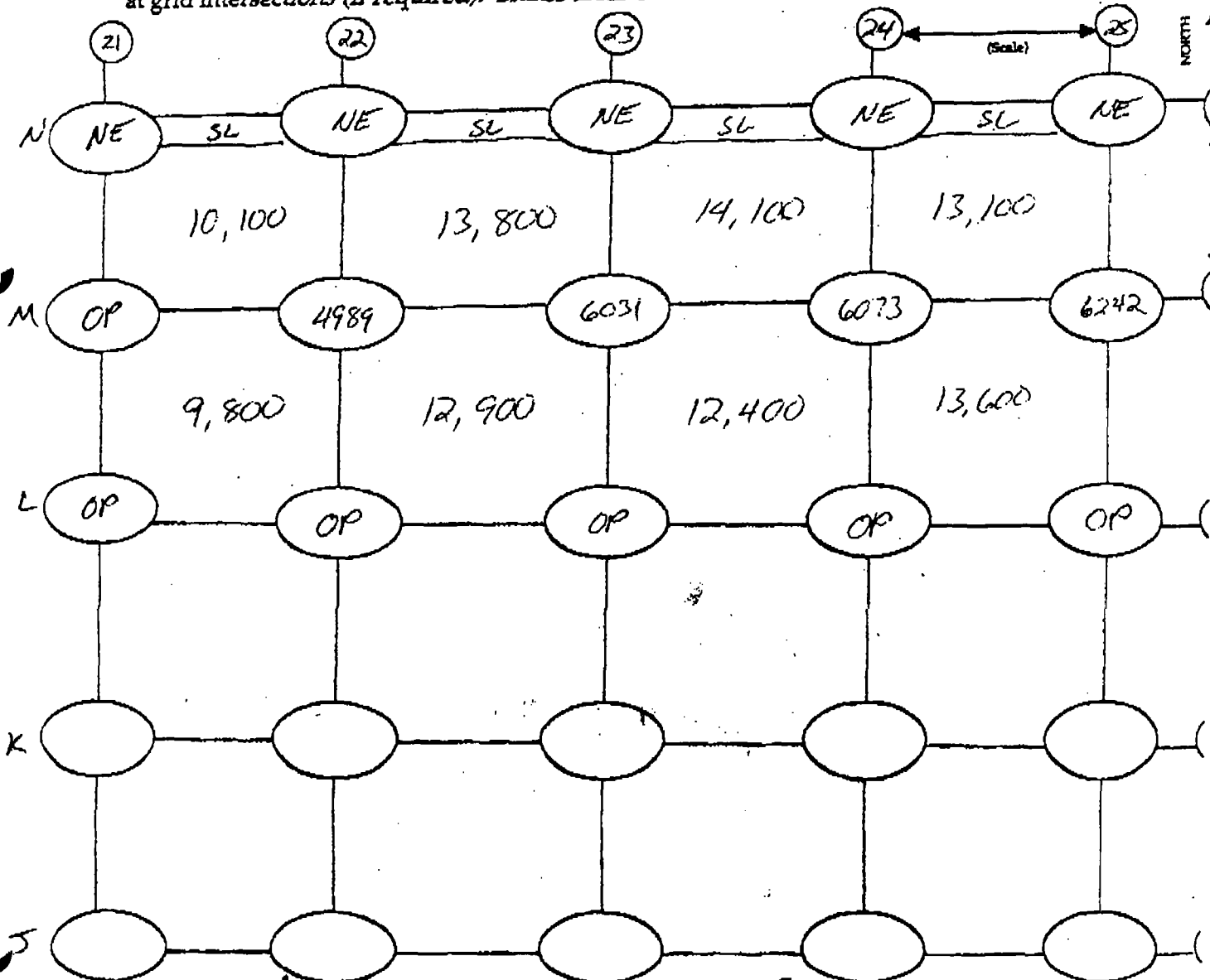
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 6.0'

Background 4K - 6K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/19/02 / 9/23/02

Technician Jerry Krause

Inst. Model Ludlum 2221

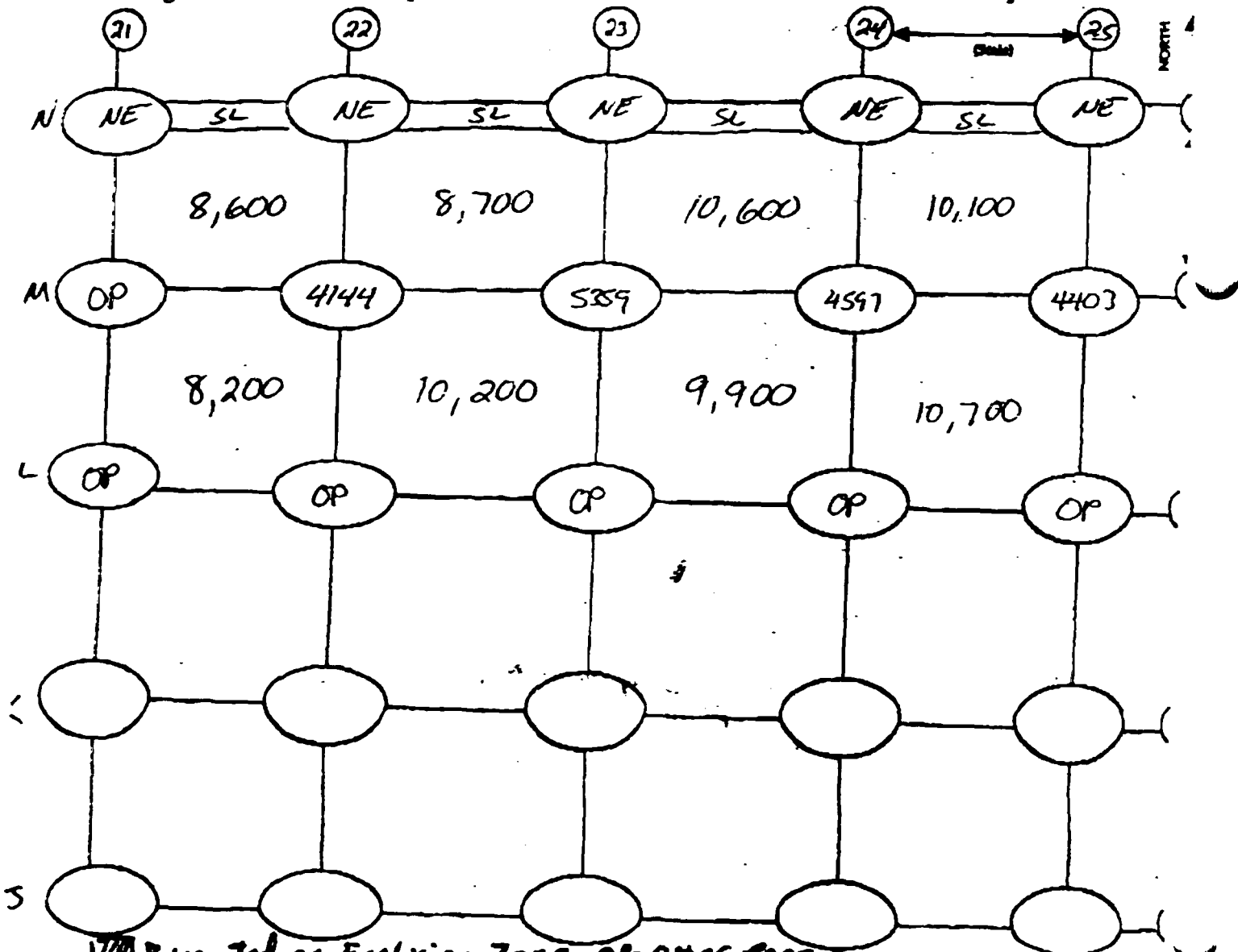
Serial No. 132844 / 168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.8'

Background 4K - 6K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone on other page
- - - - - zone boundary NE = Not excluded SL = Slope

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RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 9/20/02 / 9/23/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

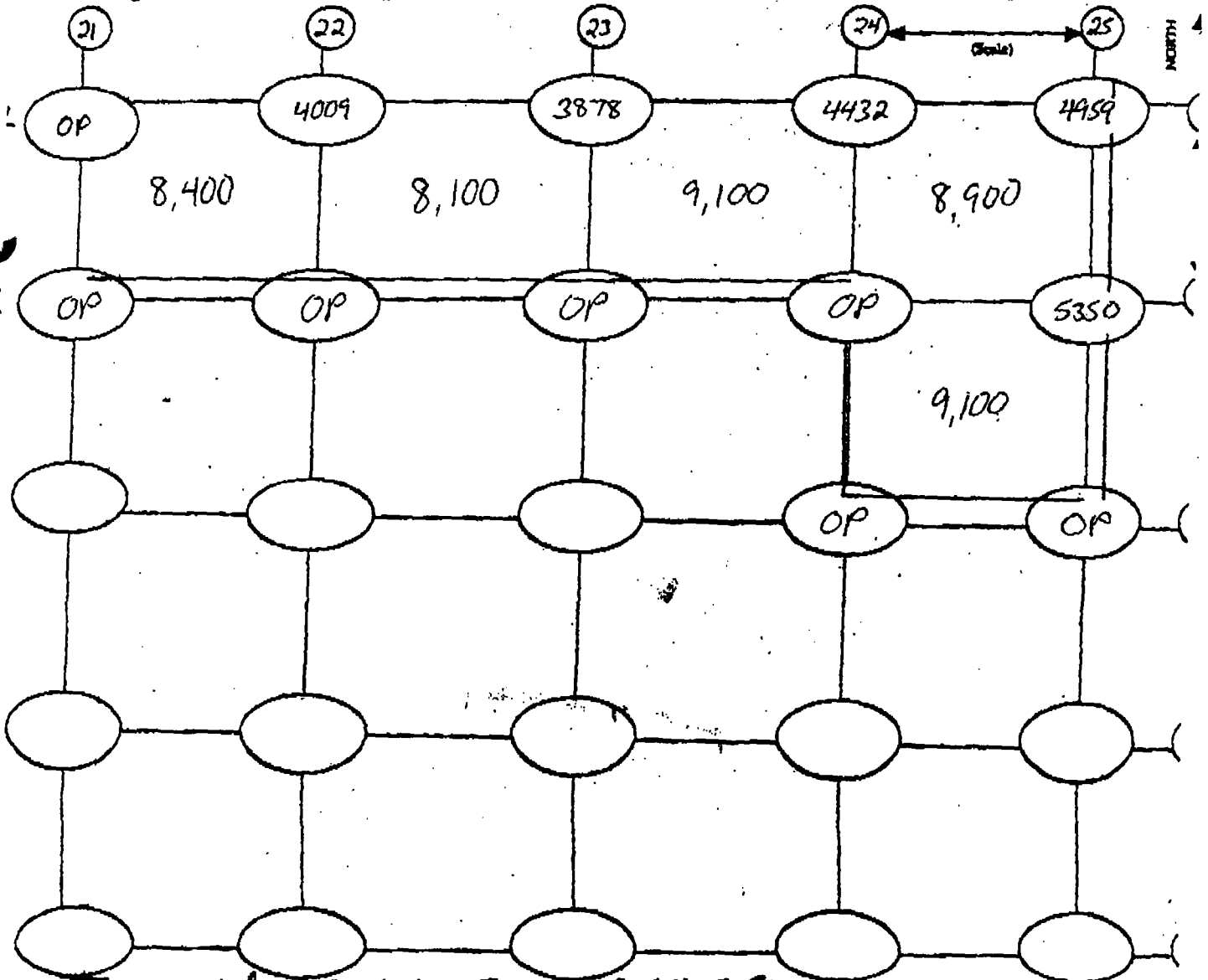
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background 4k - 6k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
- - - - - Exclusion zone boundary NE = NOT excavated SL = Slope

RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Communications, Ltd.

Date 9/20/02 / 9/23/02

Technician Jerry Krane

Inst. Model Ludlum 2221

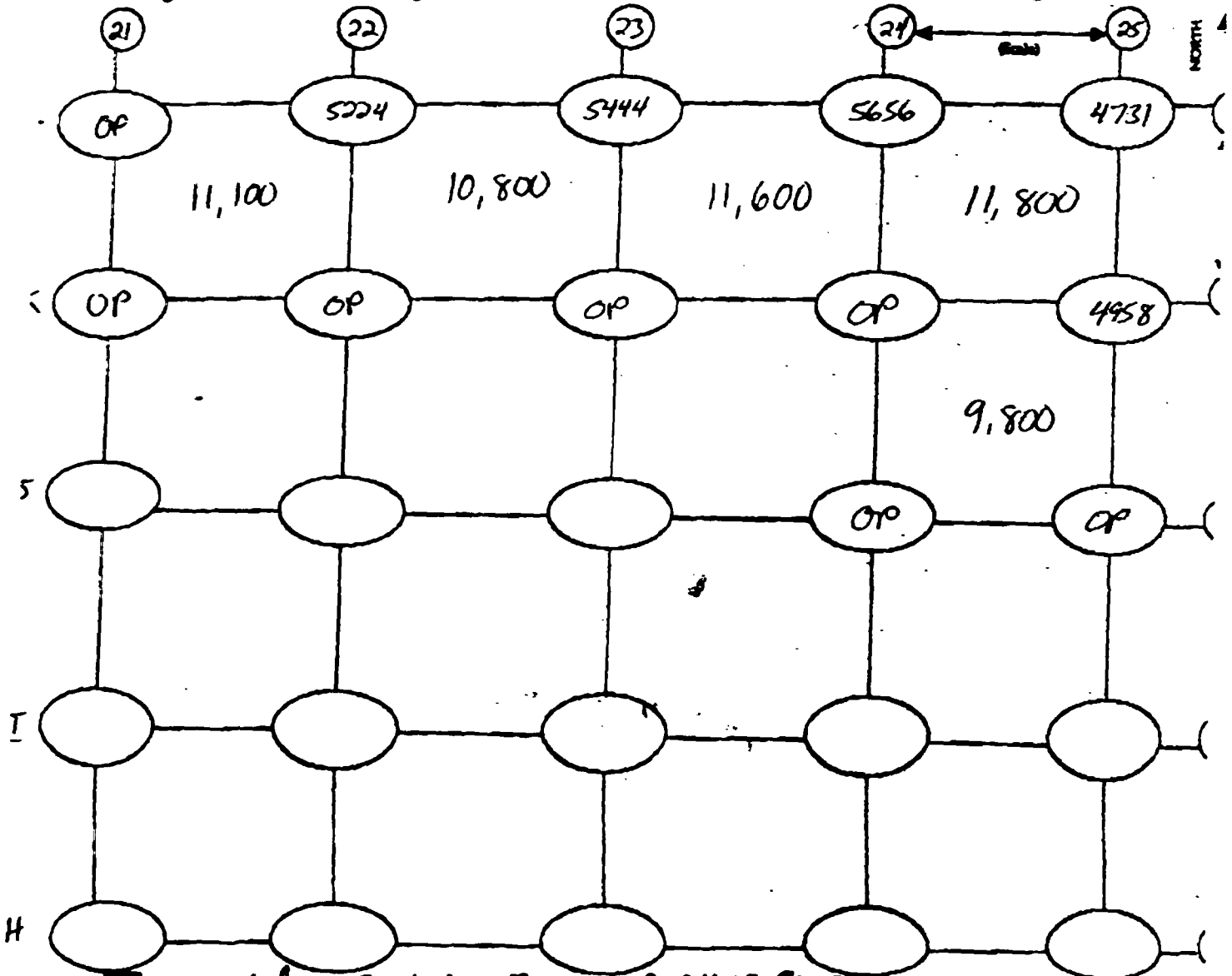
motor #	Probe #
Serial No. 132844	168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 3.0'

Background 4k-6k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone of former pass
- - - - - zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/20/02 / 9/23/02

Technician Jerry Krane

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

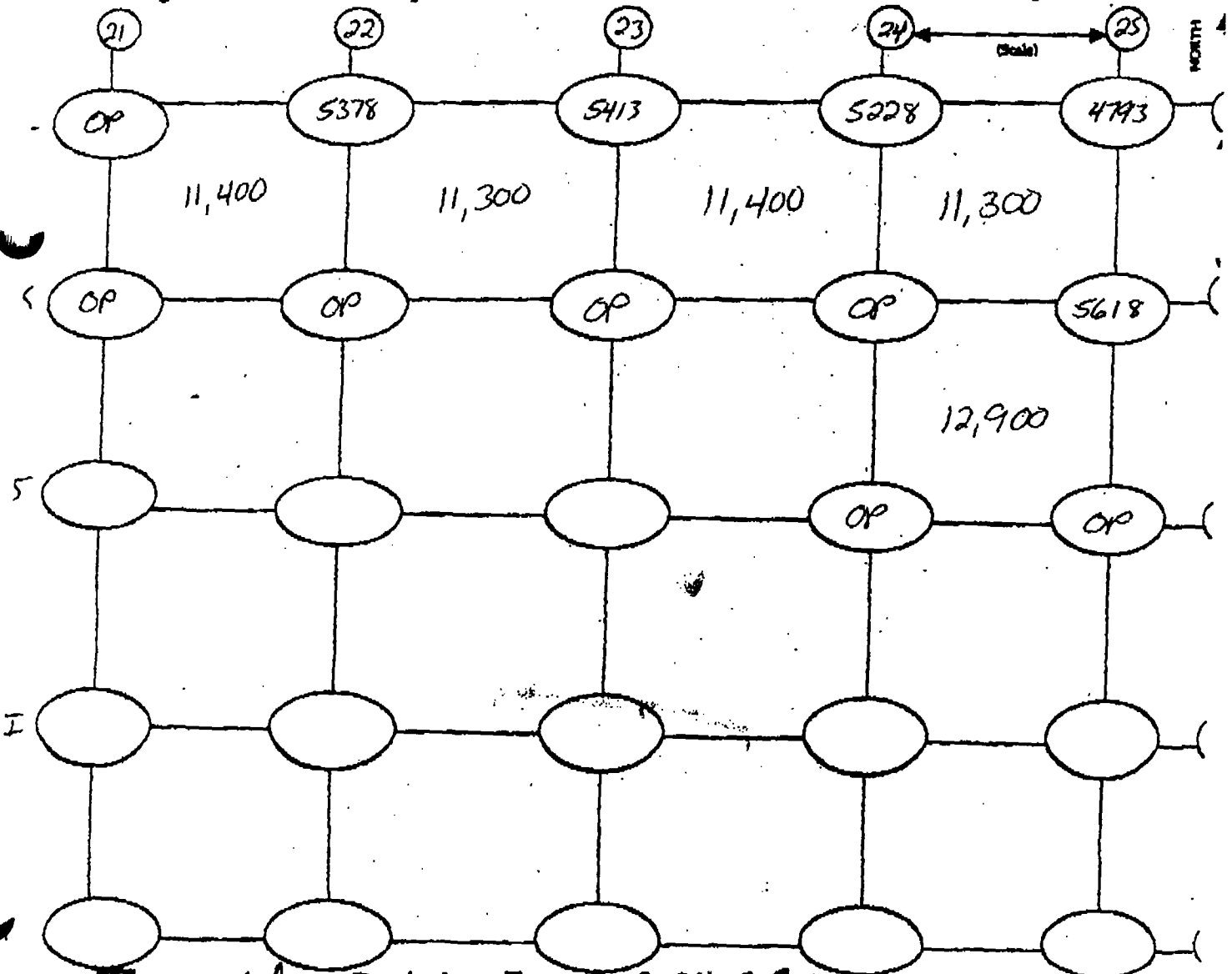
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -4.5'

Background 4k - 6k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Probe
--- = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 5 of 6

STS Consultants Ltd.

Date 9/20/02 / 9/23/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

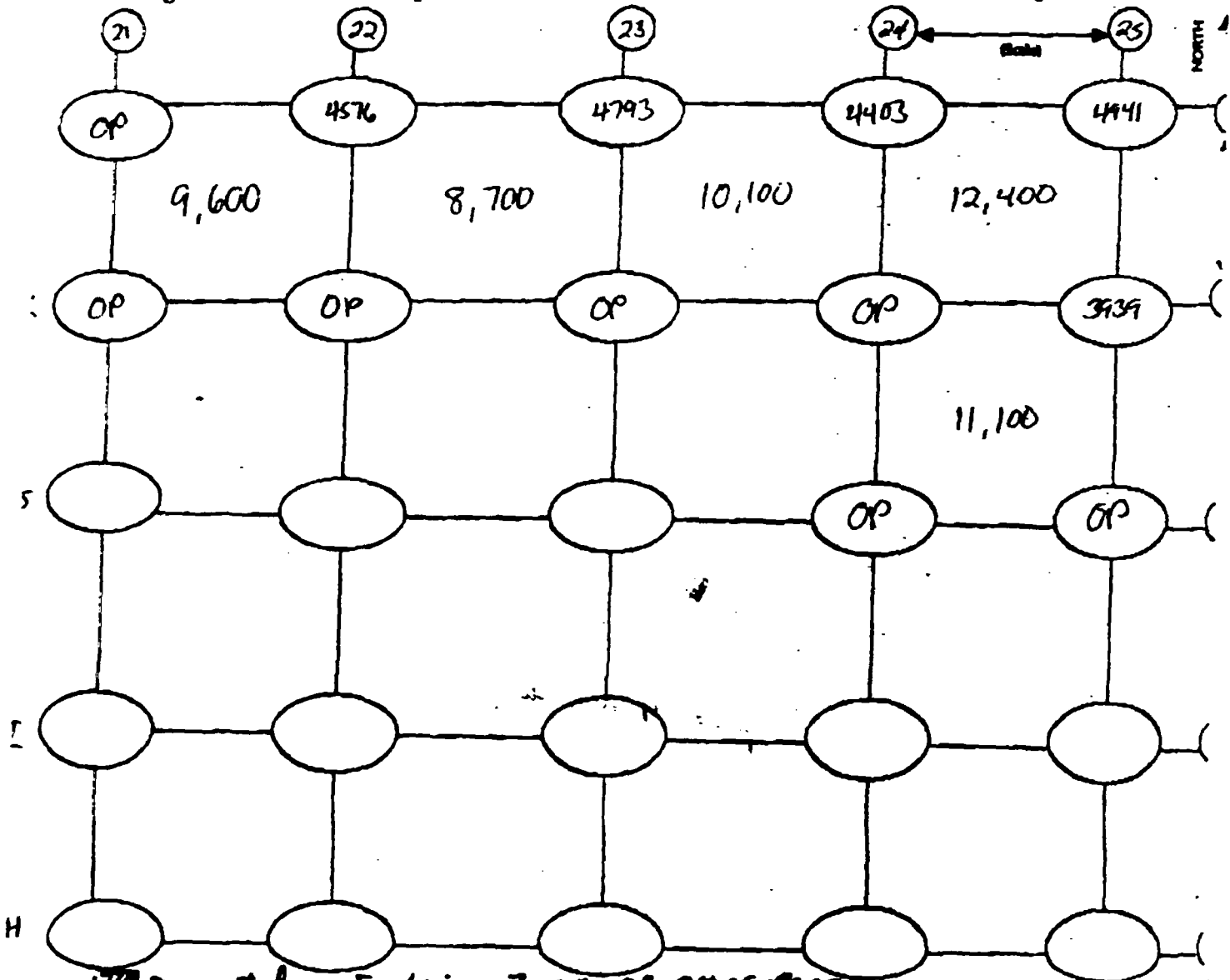
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6.0'

Background 4 k - 6 k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP, over pass
Exclusion zone boundary NE = NOT excluded SL = Slope



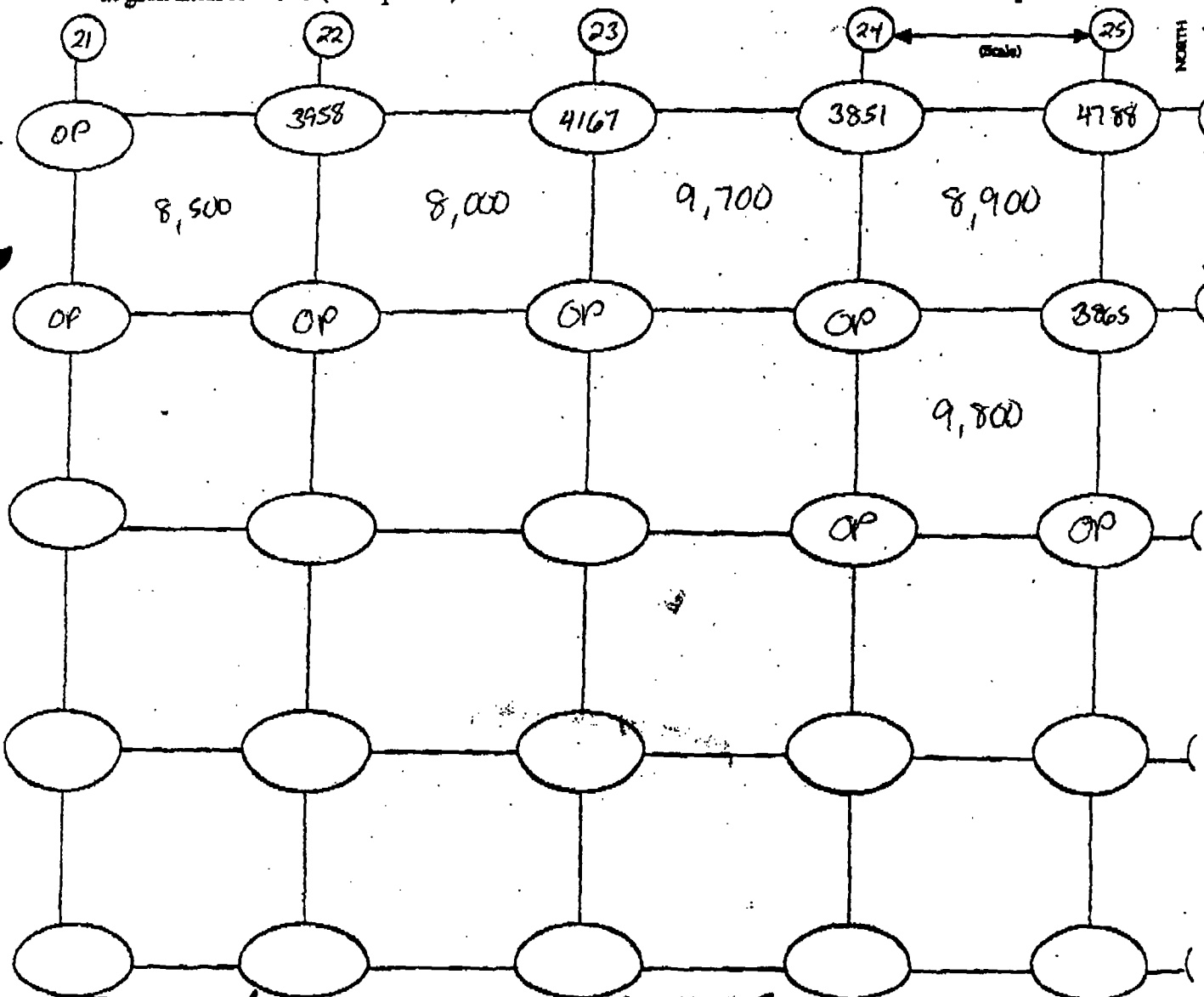
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/20/02 / 9/23/02Technician Sony KraneInst. Model Ludlum 2221Meter # 132844 Probe # 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 4k - 6k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = other page
 --- Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

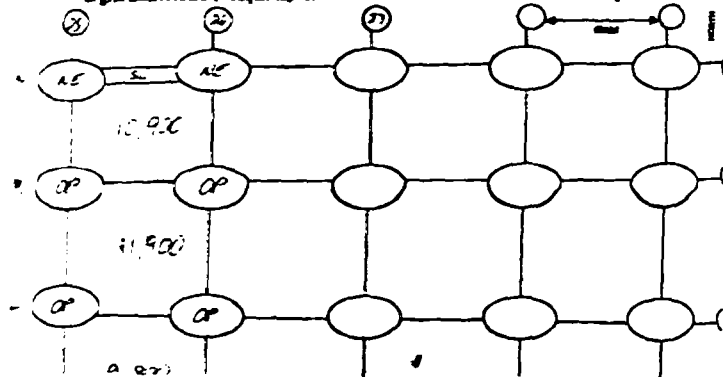
Project # 255BE-KL Project Name GMO Page 3 of 6
Date 9/23/02 Technician Jerry Krane
Inst. Model Ludlum 2221 Serial No. 132844 / 168148
Probe Type 1x1" NaI / 2x2" NaI L&E Elevation -3.0'



RADIATION SURVEY FORM

Project # 255BE-KL Project Name GMO Page 2 of 6
Date 9/23/02 Technician Jerry Krane
Inst. Model Ludlum 2221 Serial No. 132844 / 168148
Probe Type 1x1" NaI / 2x2" NaI L&E Elevation -1.5'
Shielded / Not Shielded
Background 5k - 7k cpm Action Level 20,909 cpm

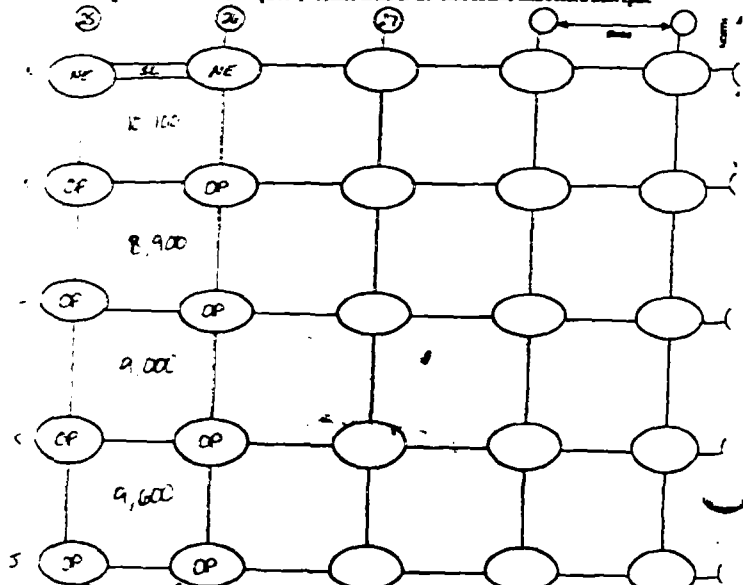
Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if requested). Shade areas of elevated counts and record max cpm.



RADIATION SURVEY FORM

Project # 255BE-KL Project Name GMO Page 1 of 6
Date 9/23/02 Technician Jerry Krane
Inst. Model Ludlum 2221 Serial No. 132844 / 168148
Probe Type 1x1" NaI / 2x2" NaI L&E Elevation Surface
Shielded / Not Shielded
Background 5k - 7k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if requested). Shade areas of elevated counts and record max cpm.



Recorded as Exclusion Zone. 0.05 mrad/hr
Range boundary NE of 100 mrad/hr SL: Slope



STS Consultants, Ltd.

RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 6

Date 9/23/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

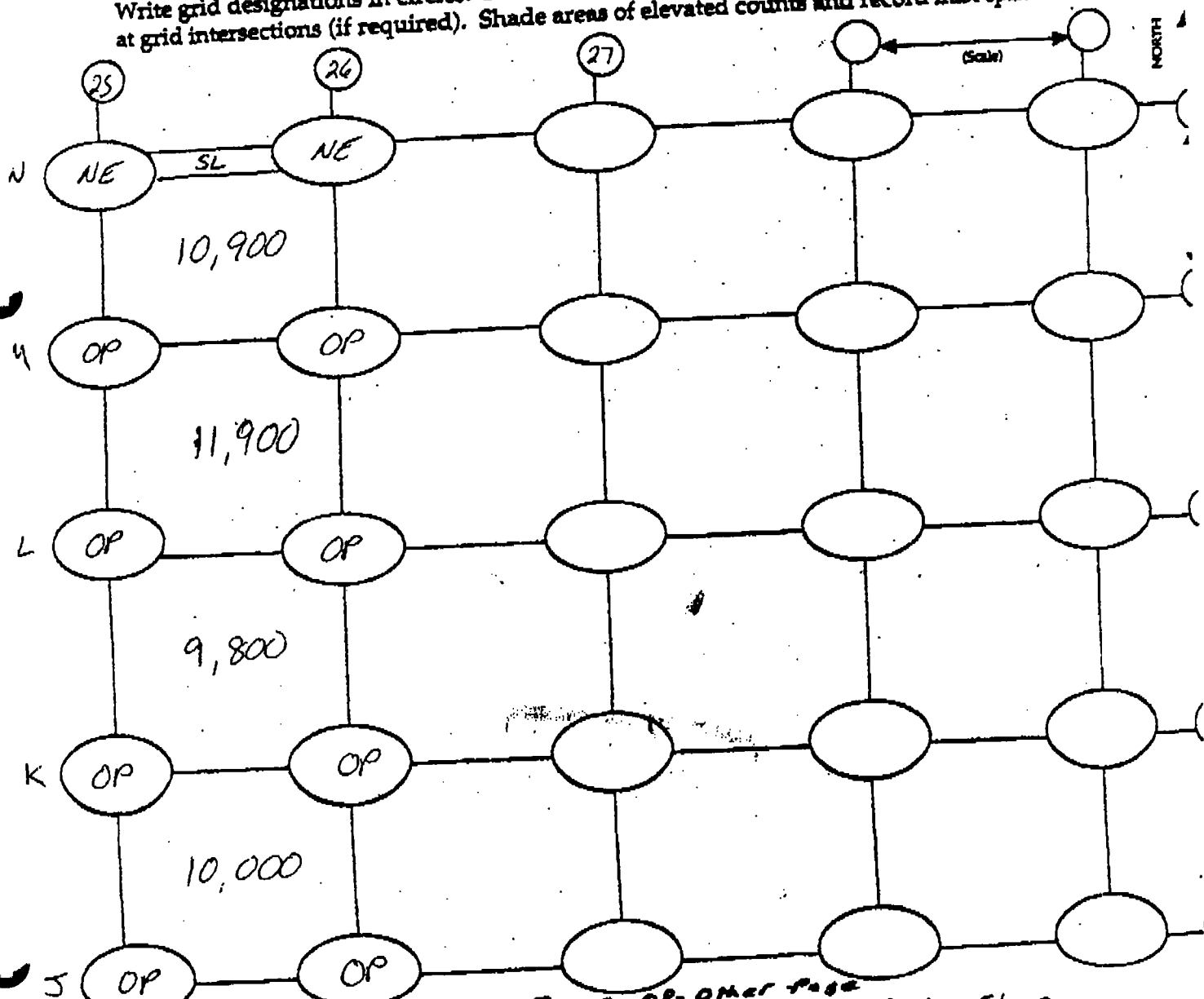
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 5.1k - 7k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Over Page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/23/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

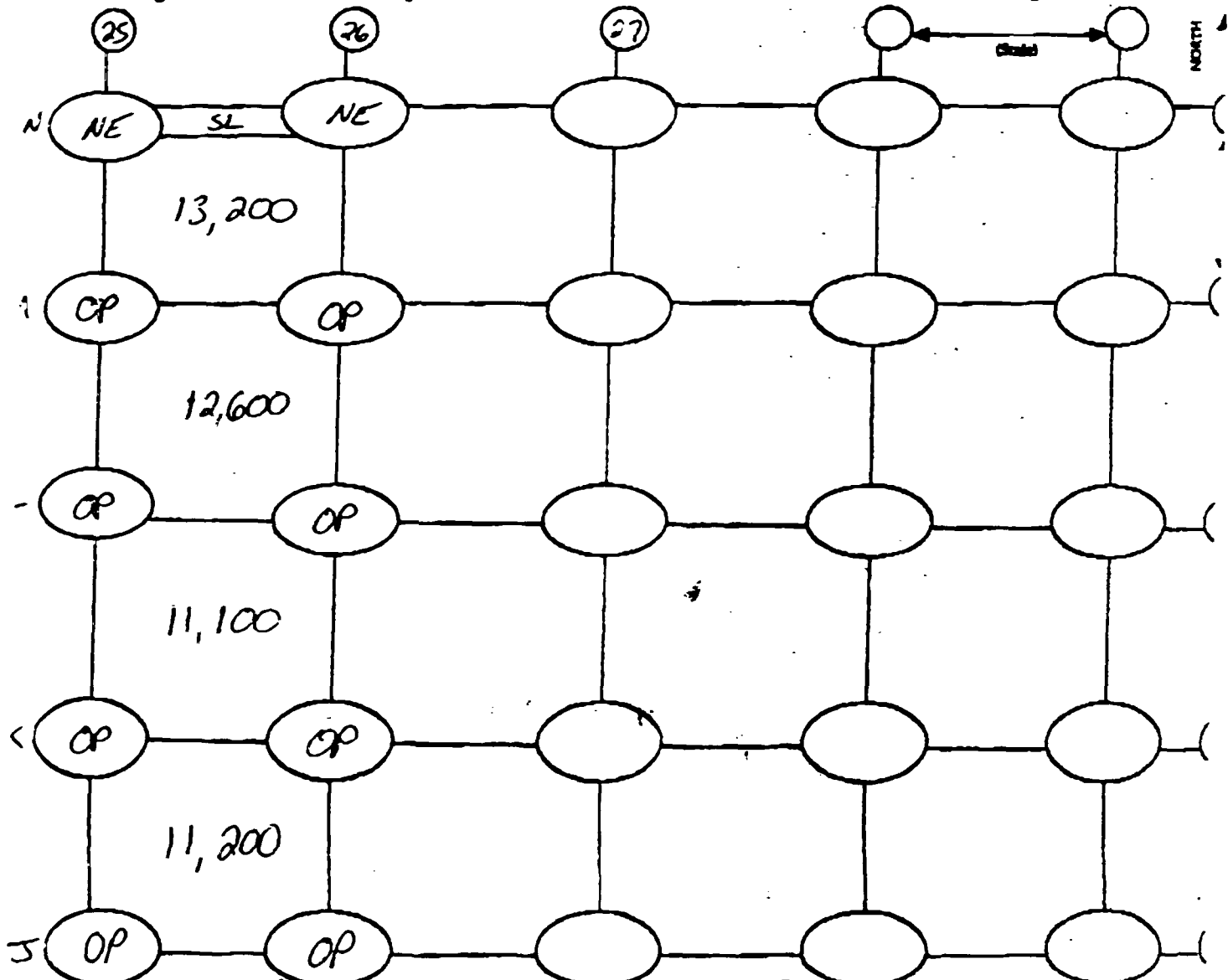
Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3.0'

Background 5K-7K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Pass
* * * Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

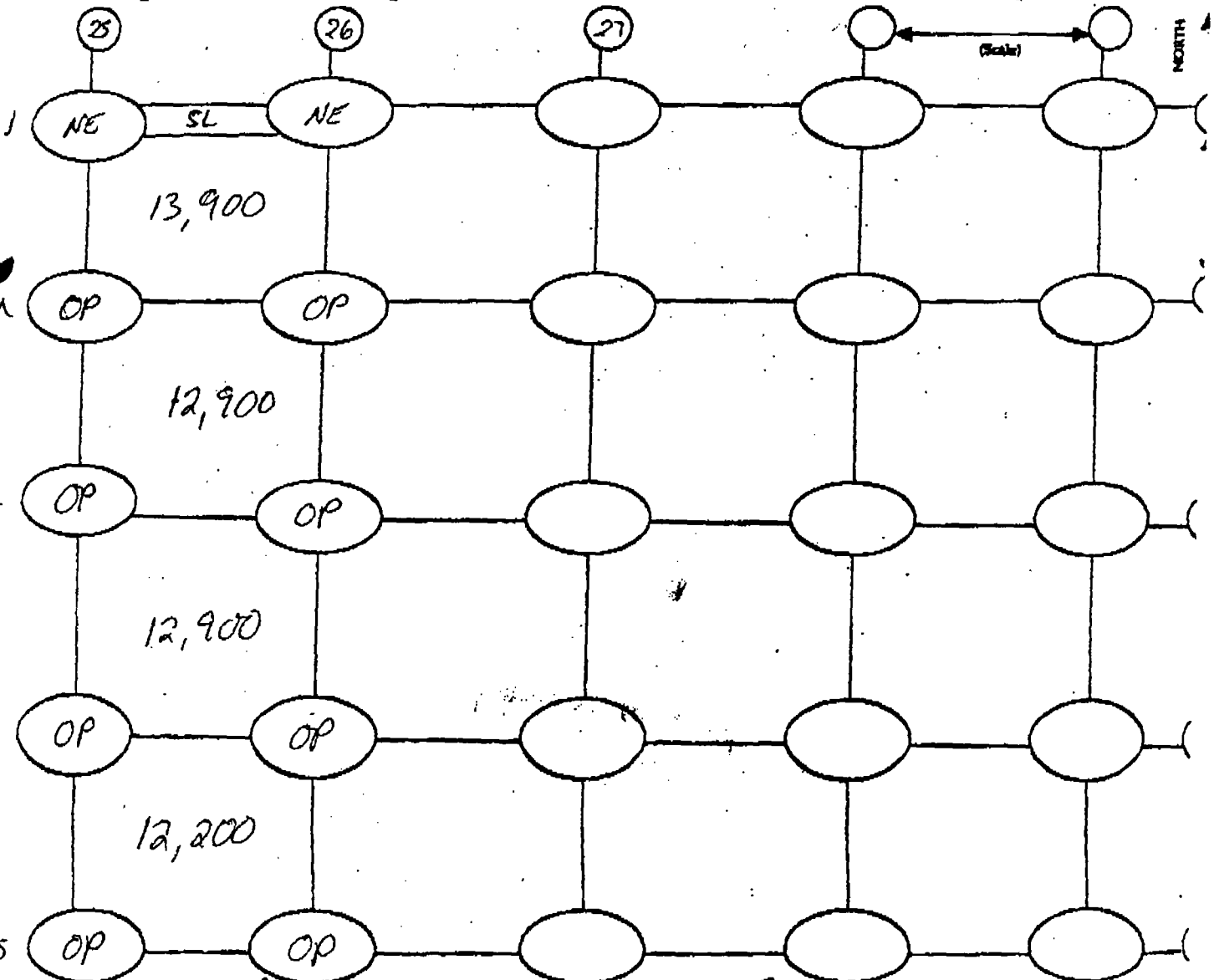
STS Consultants, Ltd.

Date 9/23/02Technician Jerry KrausInst. Model Ludlum 2221

meter #	Probe #
132844	168148

Probe Type: 1"x1"NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background SK-7K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 *** = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 5 of 6

Date 9/23/02

Technician Jerry Krane

Inst. Model Ludlum 2221

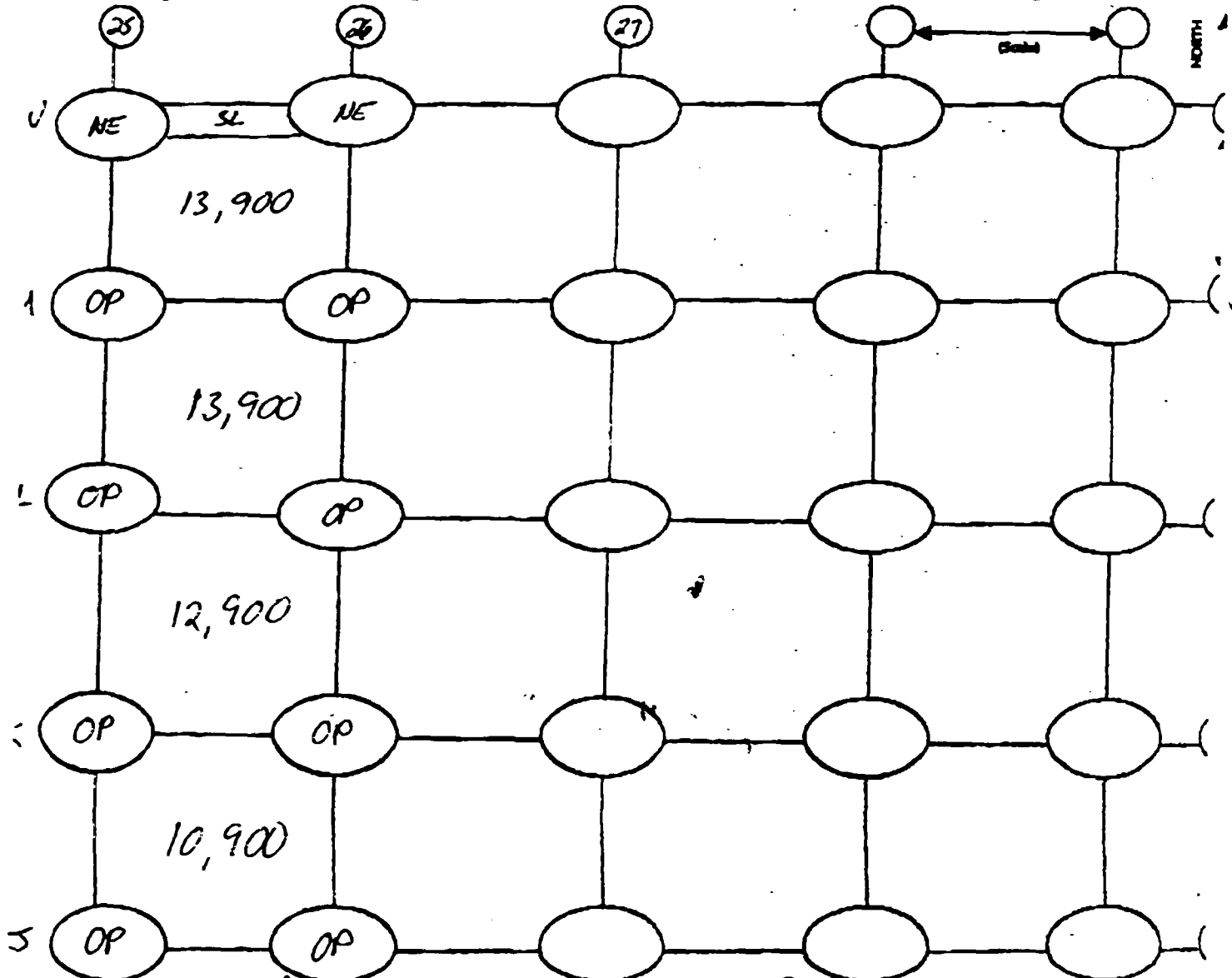
Serial No. 132844 / 168148

Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -6.0'

Background SK-7K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP, other case
--- = Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

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Date 9/23/02

Technician Jerry Krane

Inst. Model Ludlum 2221

Serial No. 132844 / 168148

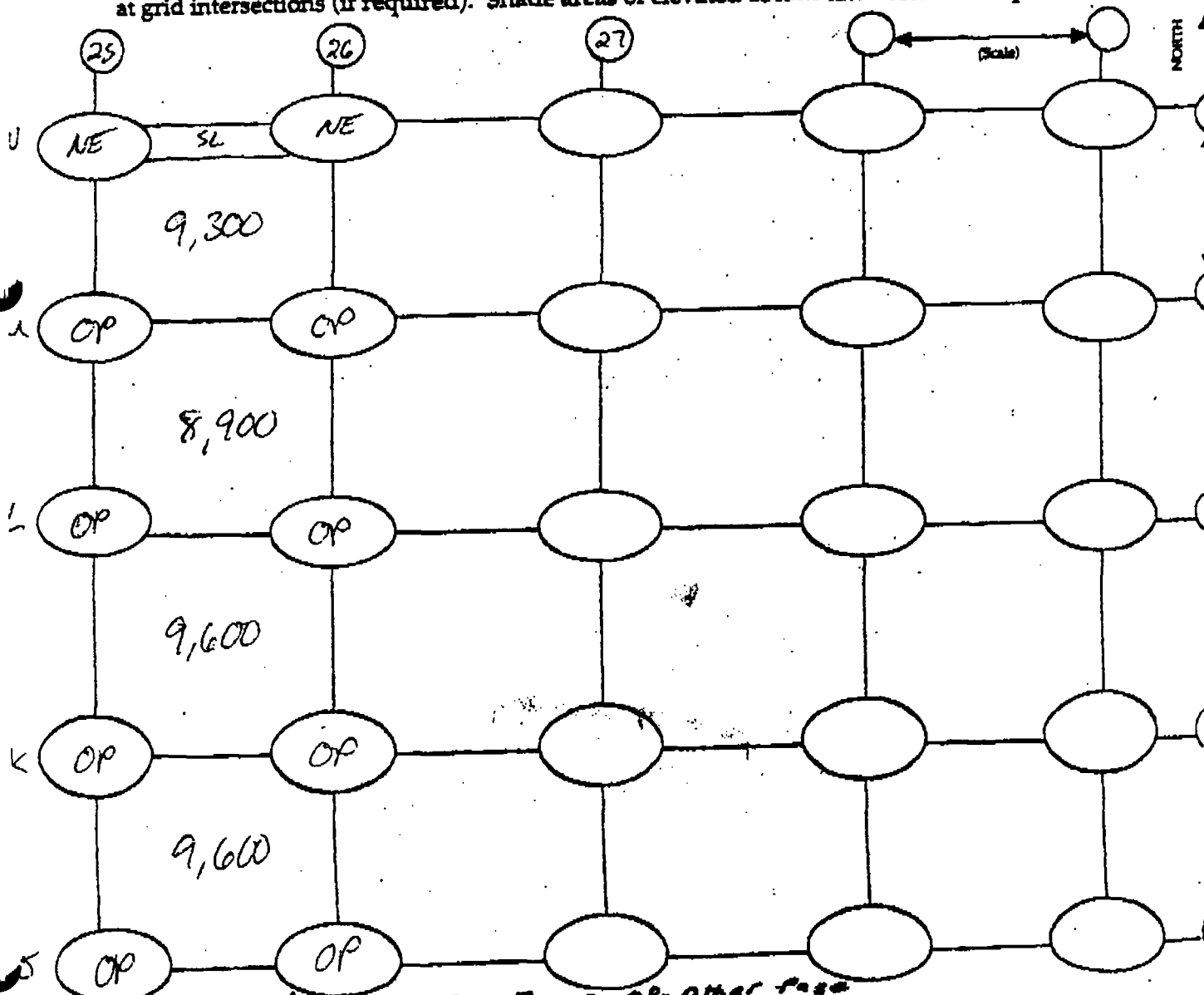
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 7.5'

Background SK - 7K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Pass
 = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consulting, Ltd.

Date 9/23/02 / 9/24/02

Technician Serry Krane

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

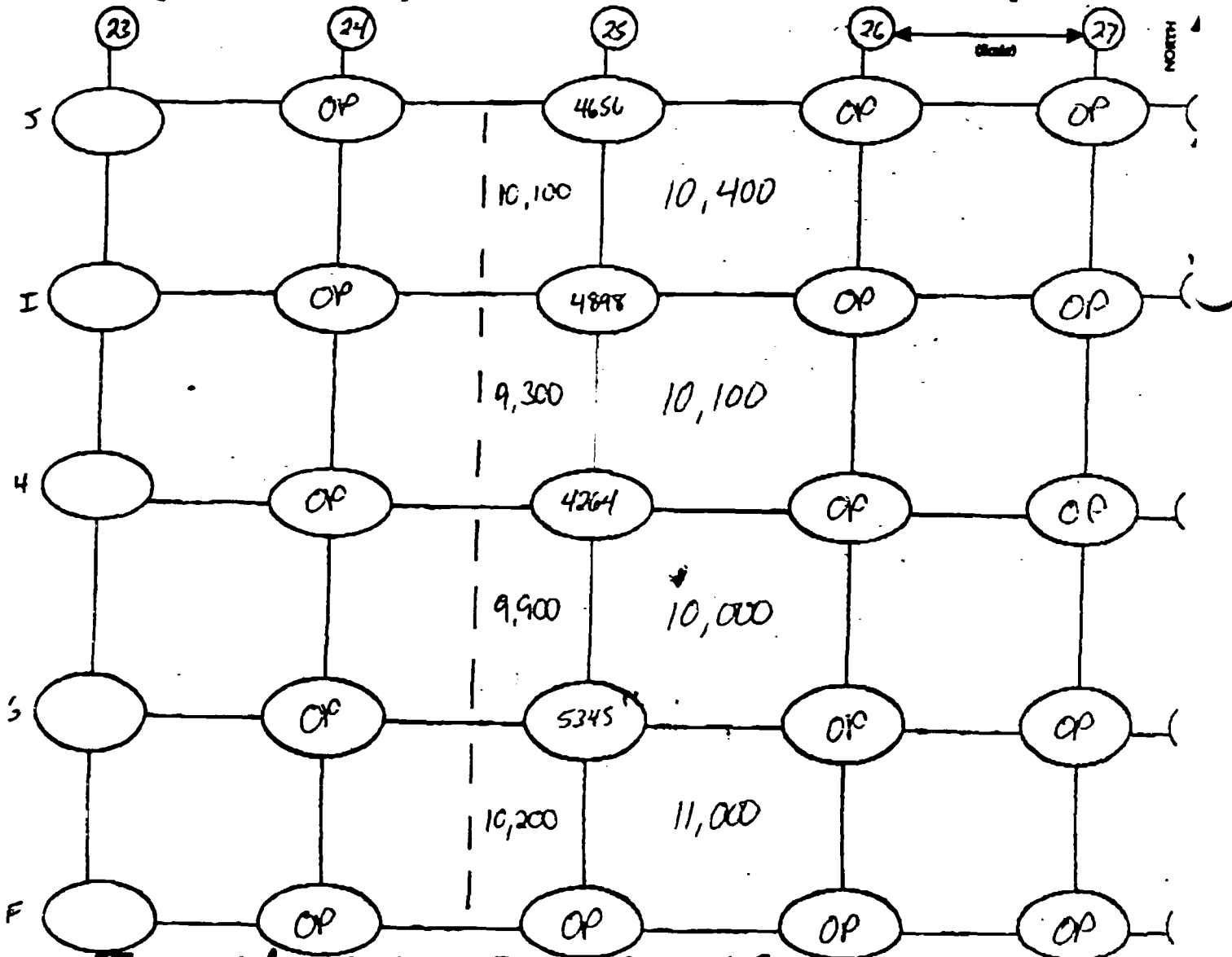
Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation Surface

Background SK-7K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OPs on other page
* * * = Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI

Project Name GMO

Page 2 of 6

Date 9/23/02 / 9/24/02

Technician Jerry Krane

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

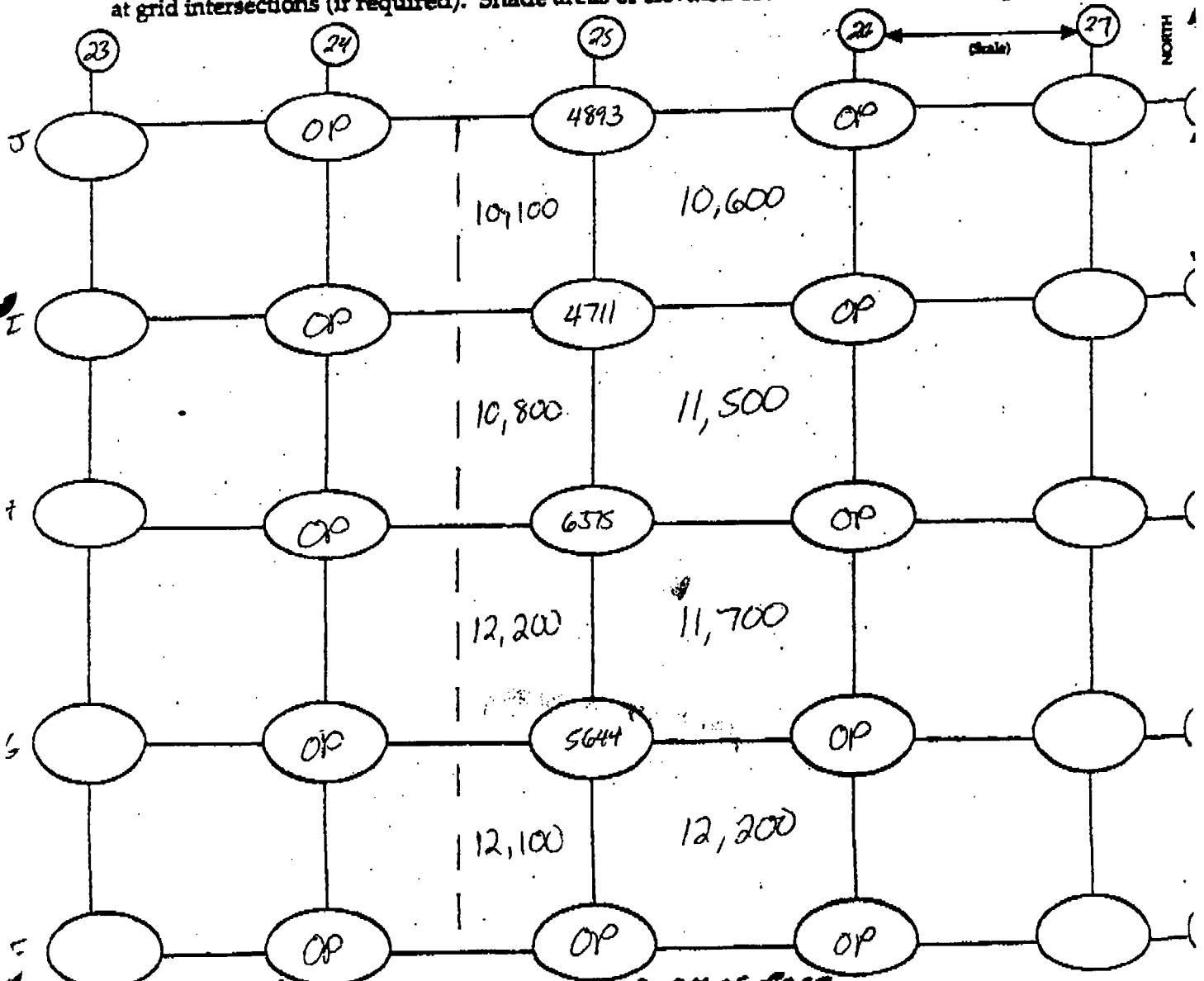
Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation -1.5'

Background 5K-7K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
* Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 3 of 6

STS Consultants, Ltd.

Date 9/23/02 / 9/24/02

Technician Jerry Krane

Inst. Model Ludlum 2221

meter # / Probe #

Serial No. _____

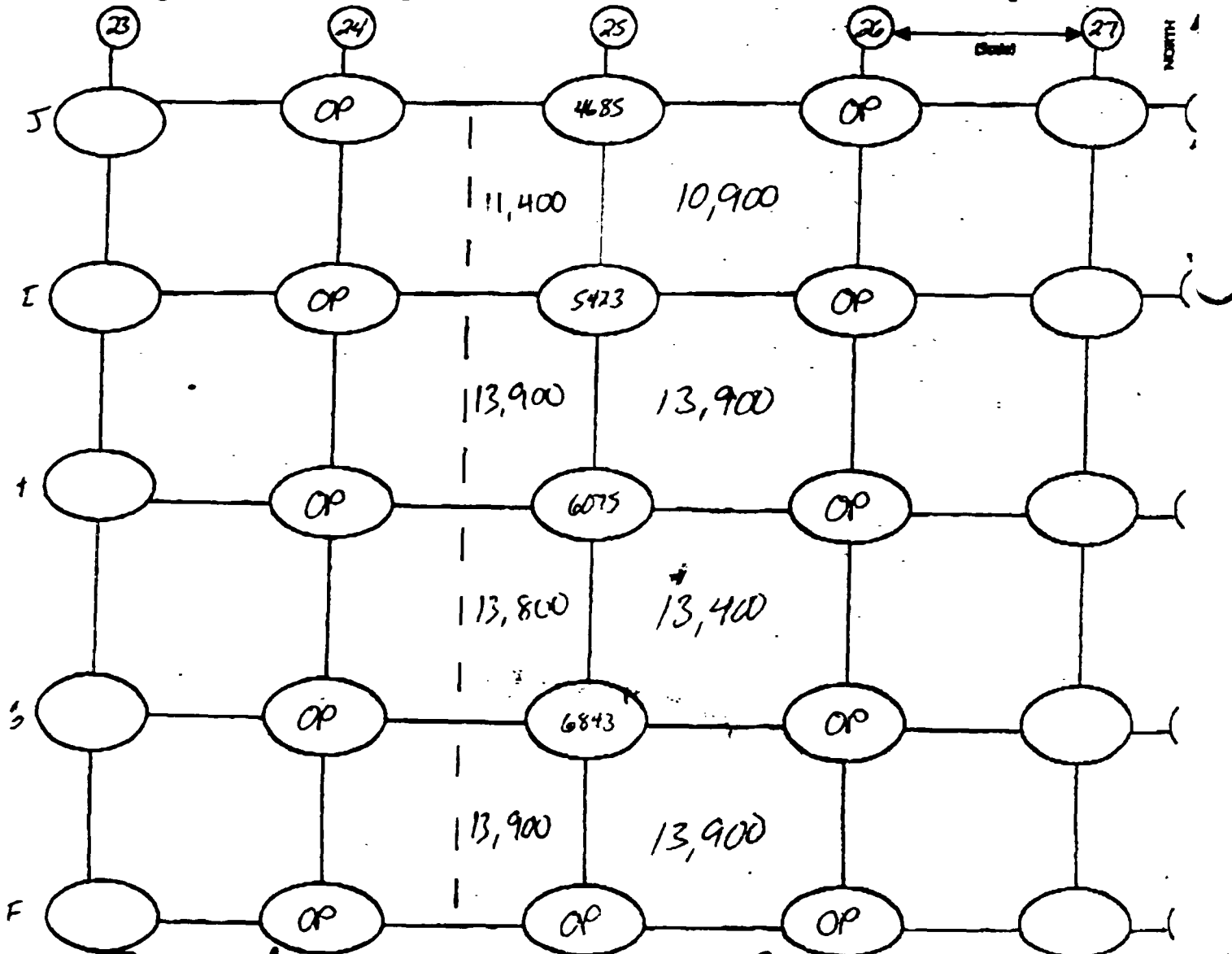
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -3.0'

Background 5K - 7K cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Exempted as Exclusion Zone OP or over pass
* = Exclusion zone boundary NE = Not exempted SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/23/02 / 9/24/02

Technician Jerry Krane
meter # / Probe #

Inst. Model Ludlum 2221

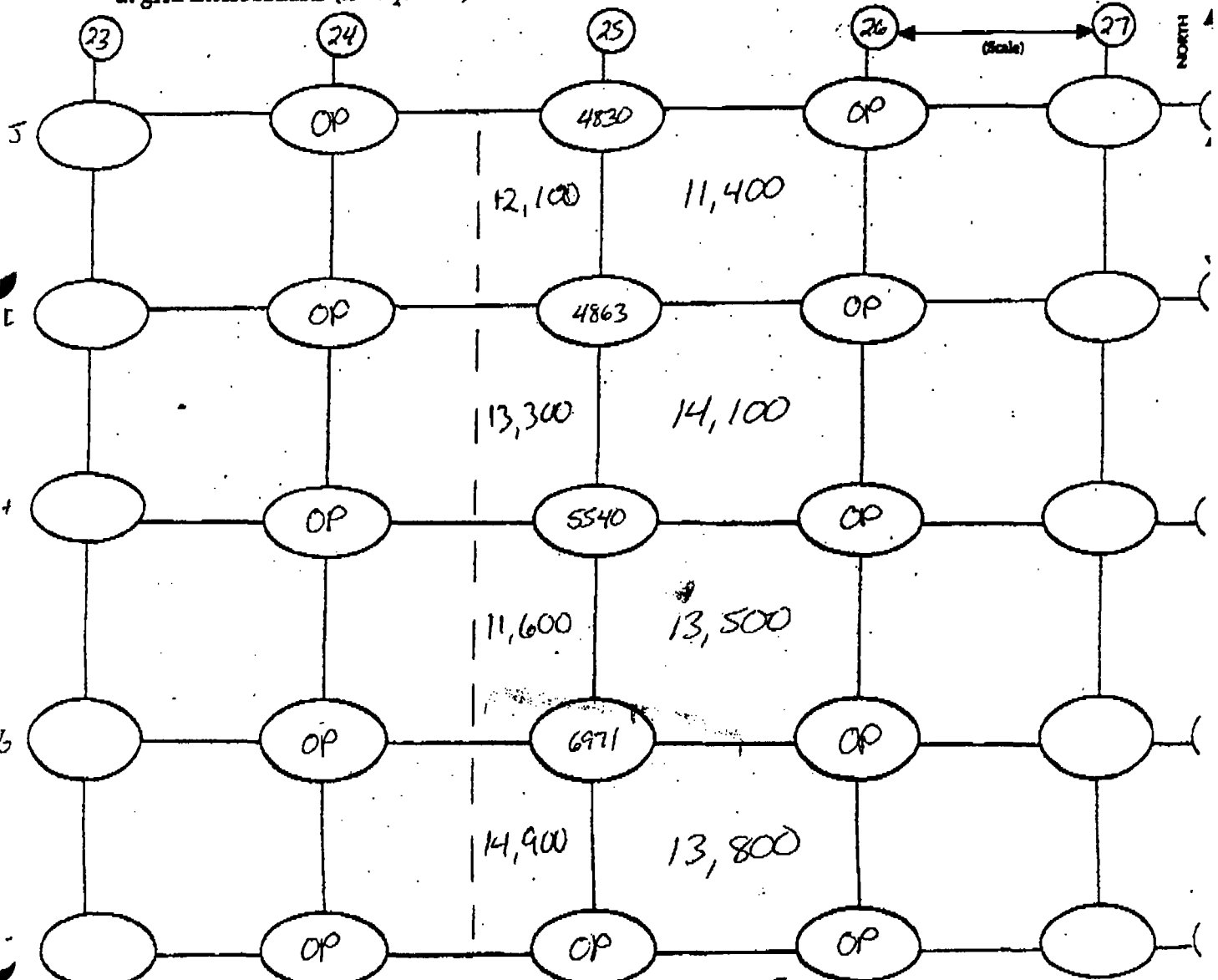
Serial No. _____

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation - 4.5'

Background SK-7K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Area
*** = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/23/02 / 9/24/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

meter # 132844 Probe # 168148

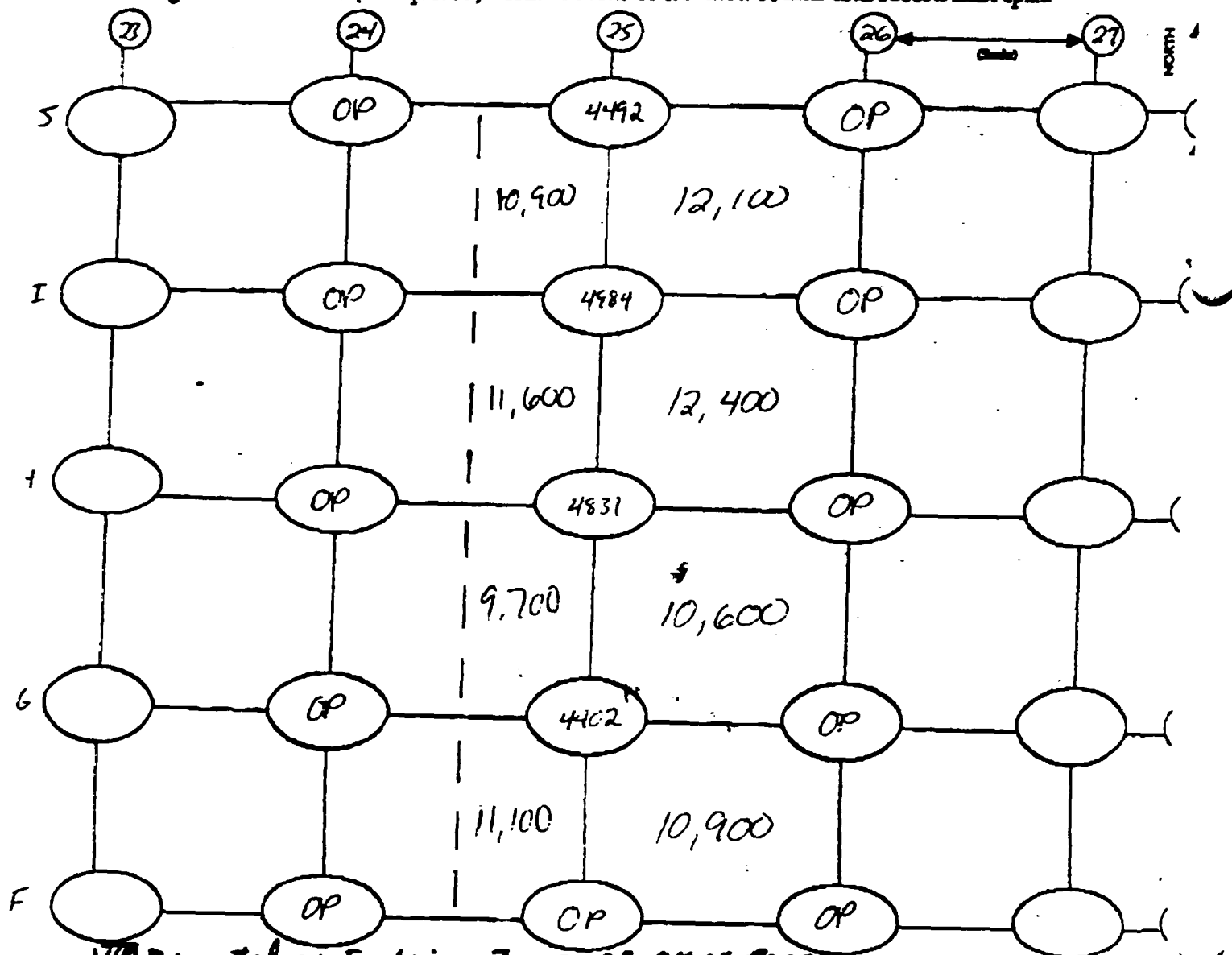
Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation -6.0'

Background 5k - 7k cpm

Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP = Other Page
☒ Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/23/02 / 9/24/02

Technician Jerry Krane

Inst. Model Ludlum 2221

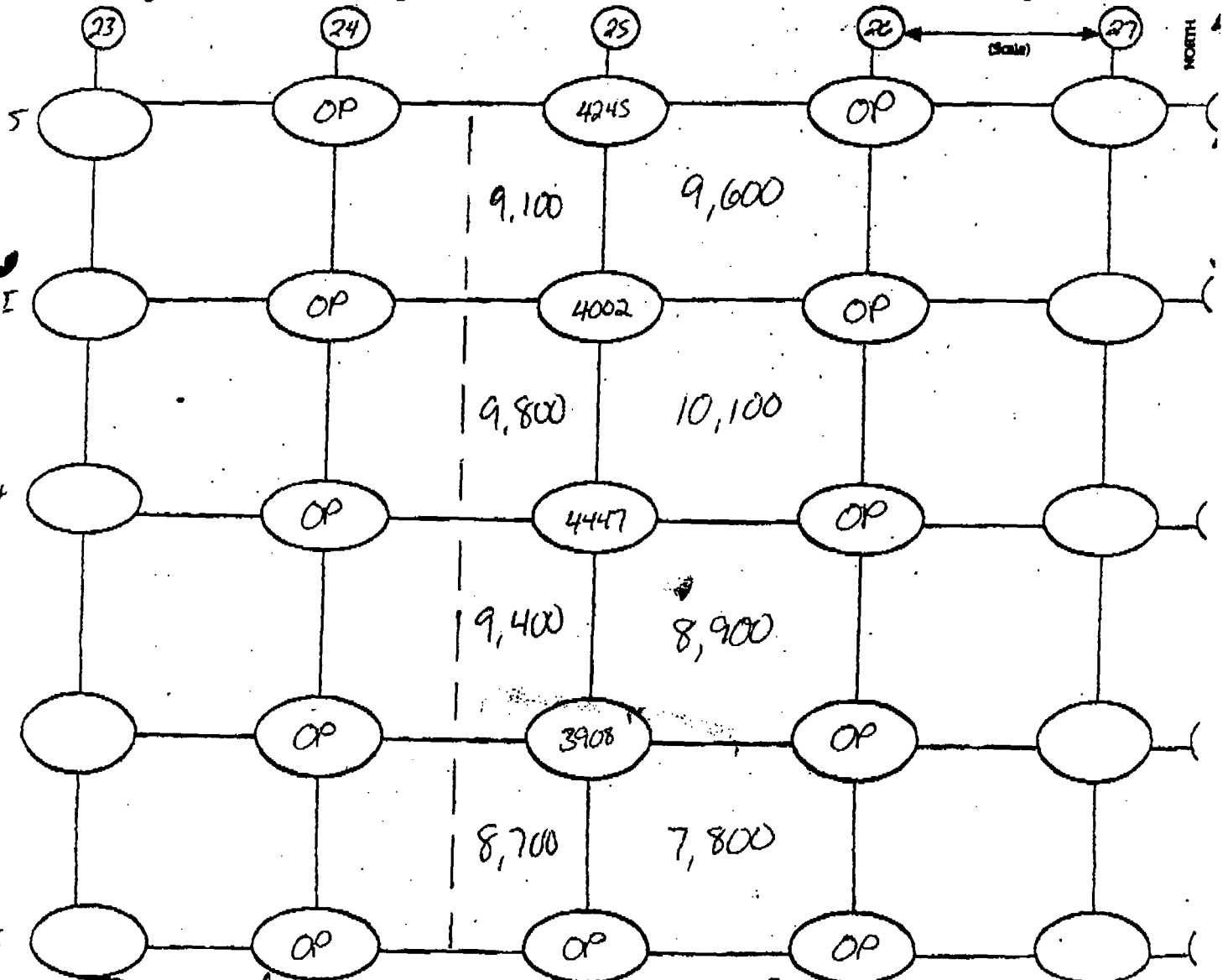
meter # 132844 Probe # 168148

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -7.5'

Background 5k - 7k cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, other flags
* = Exclusion zone boundary NE = Not excavated SL = Slope

VGA



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

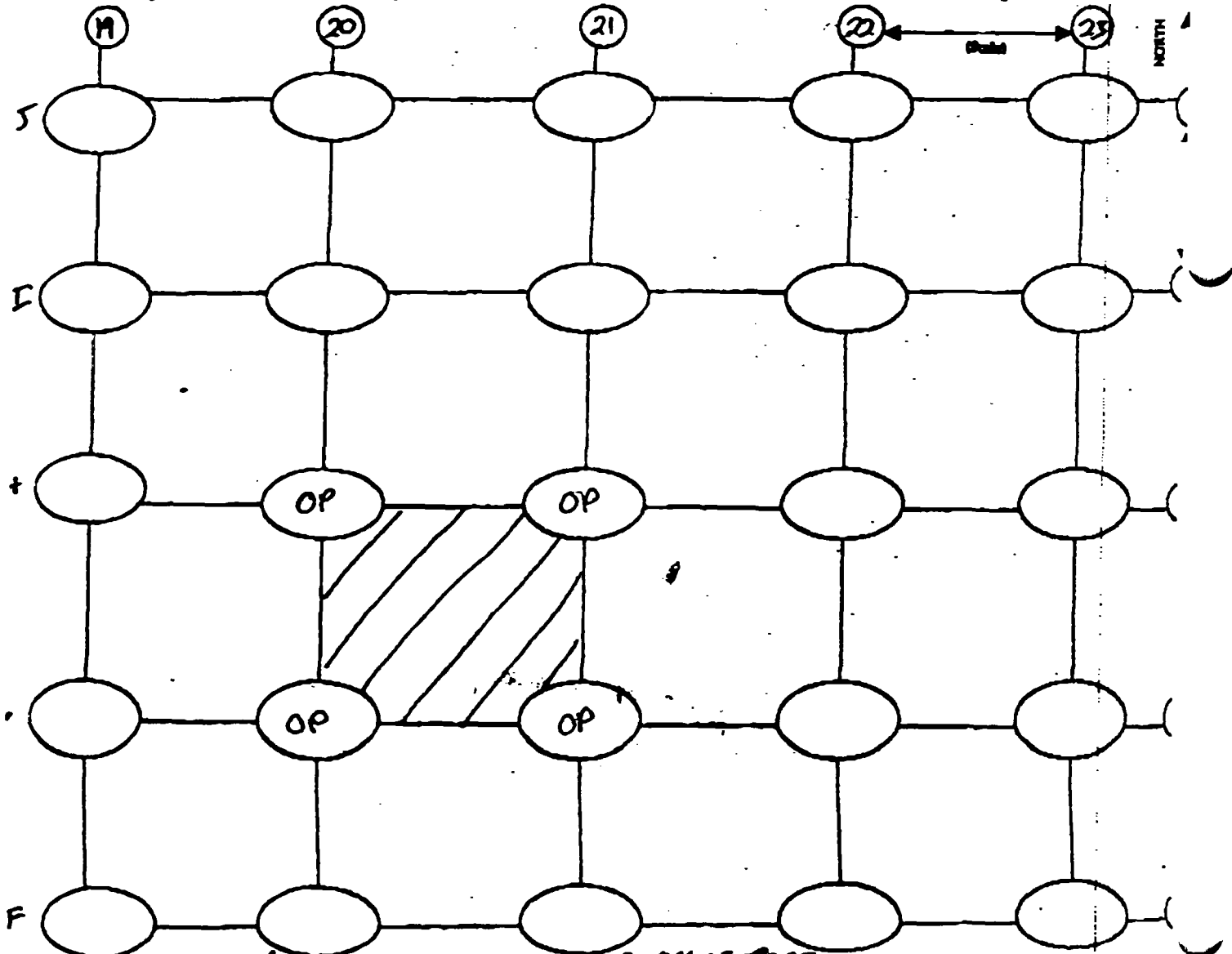
STS Corporation, Ltd.

Date 9/25/02Technician Serg KraveInst. Model Ludlum 2221

meter #	Probe #
Serial No. <u>127242</u>	<u>168144</u>

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 4K-6K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP on other page
Exclusion zone boundary NE = Not excluded SL = Slope

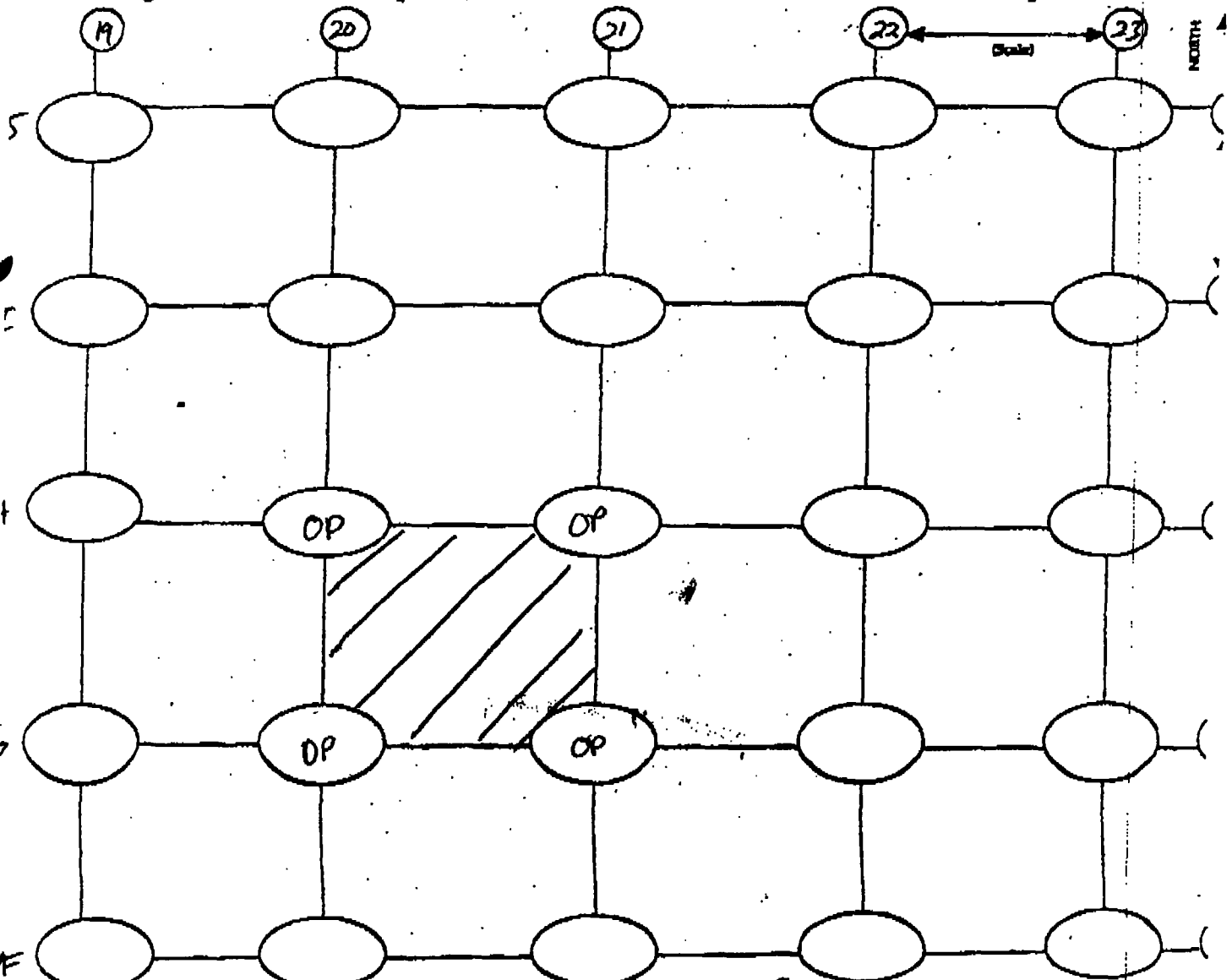


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 2 of 6Date 9/25/02Technician Serry KrausInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 4k - 6k cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 * * = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STB Corporation, Ltd.

Date 9/25/02

Technician Terry Krause

Inst. Model Ludlum 2221

Serial No. 127242 / 168144

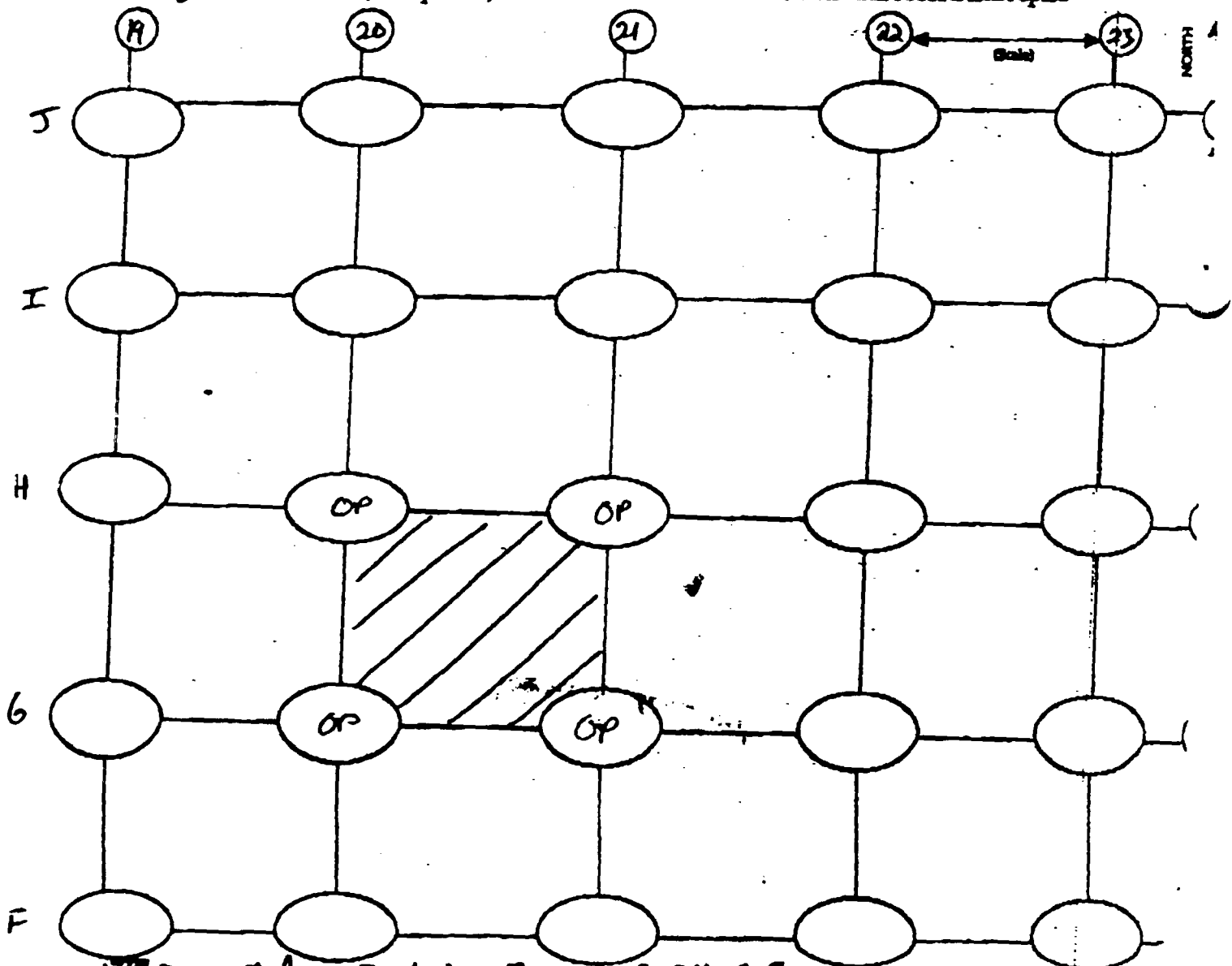
Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation -3.0'

Background 4K-6K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 Excavated as Exclusion Zone of 0.0m or less
--- Exclusion zone boundary NE = Not excavated SL = Slope



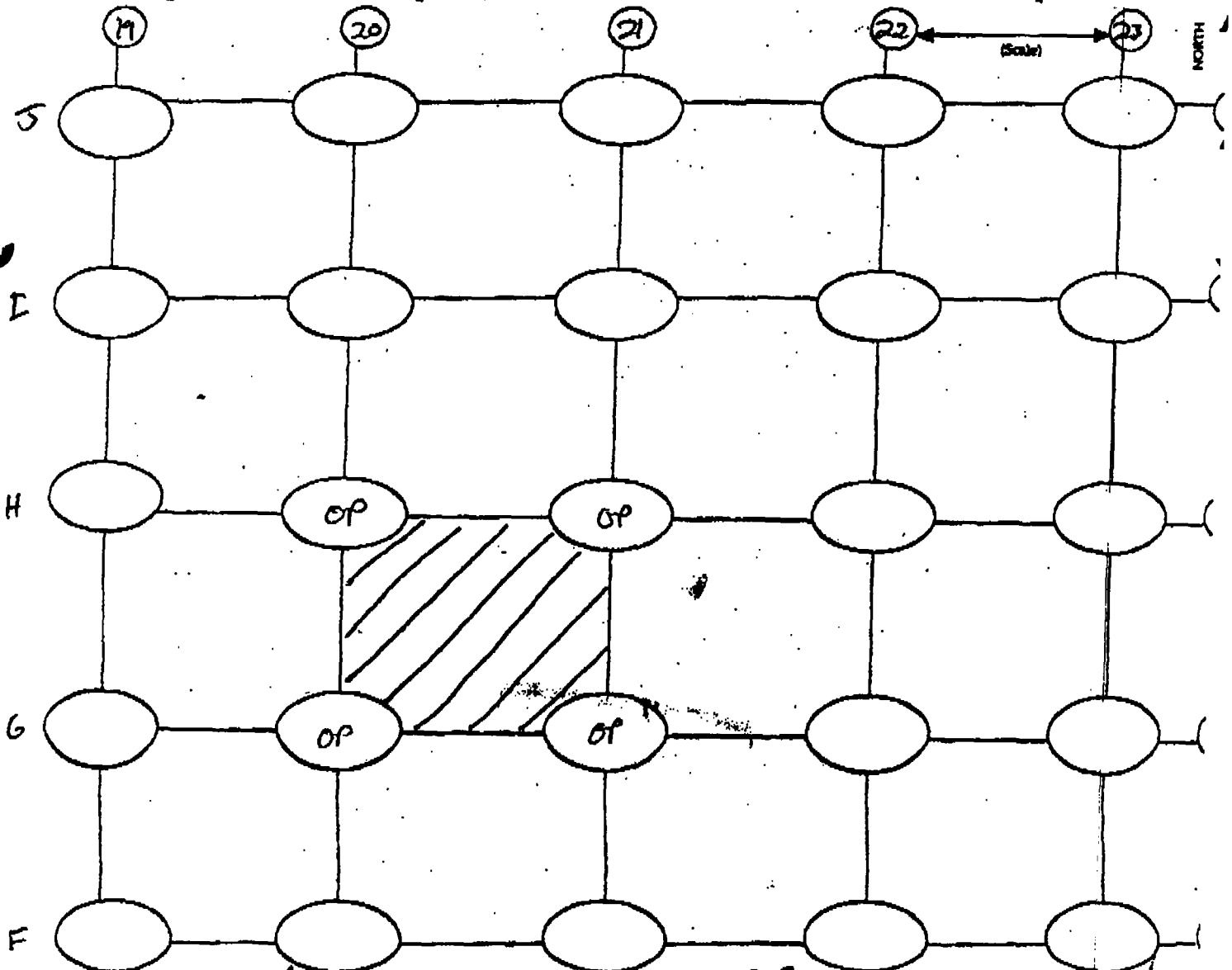
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/25/02Technician Jerry Krahn
meter # / Probe #Inst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 4K-6K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, other page
 - Exclusion zone boundary NE = Not excavated SL = Slope



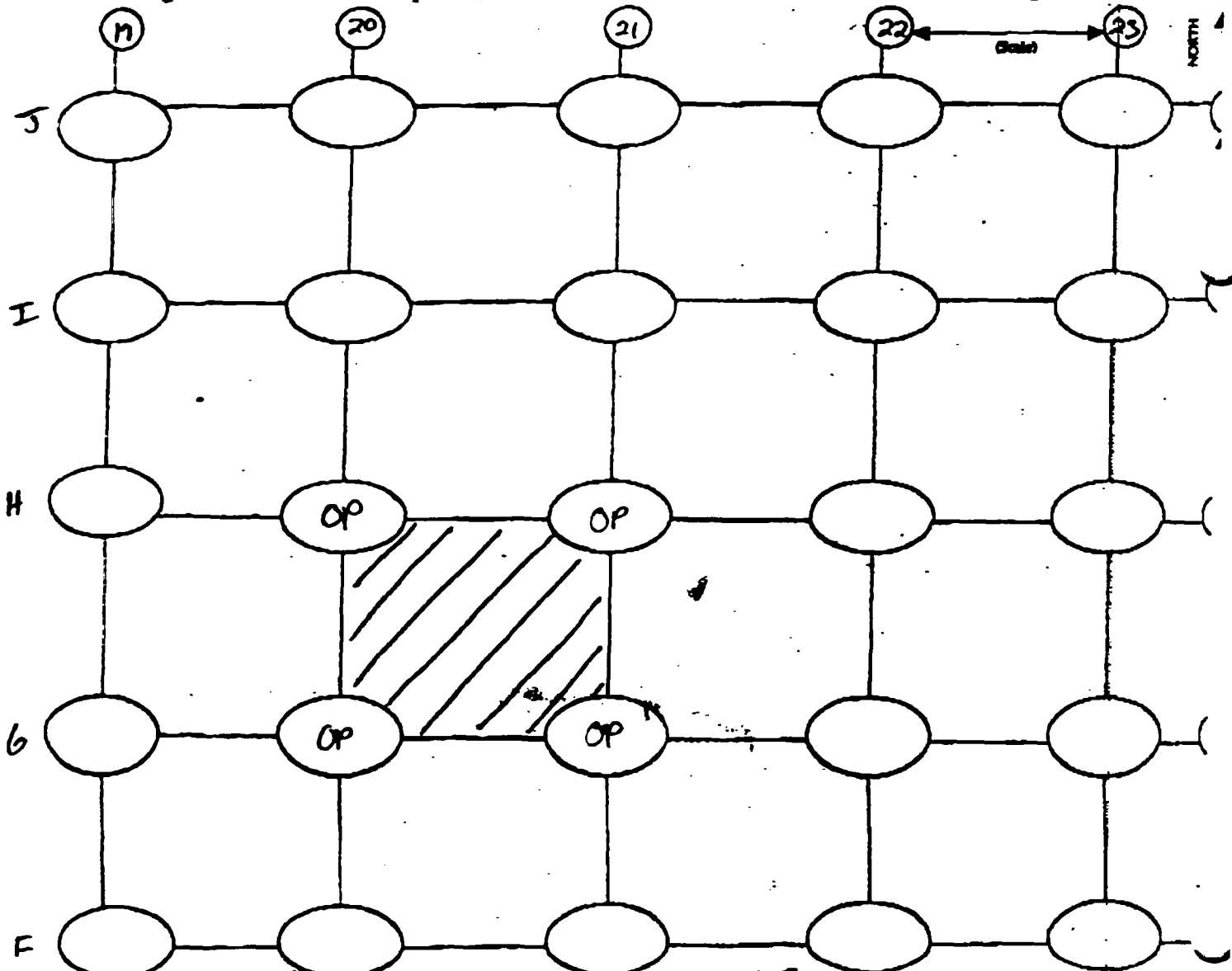
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/25/02Technician Jerry KraneInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6.0'Background 4K - 6K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
 --- Exclusion zone boundary NE: Not excavated SL: Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 6

STS Consultants, Ltd.

Date

9/25/02

Technician

Jerry Kraus

Inst. Model

Ludlum 2221

Serial No.

127242168144Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not Shielded

Lift Elevation

- 7.5'

Background

415 - 6K

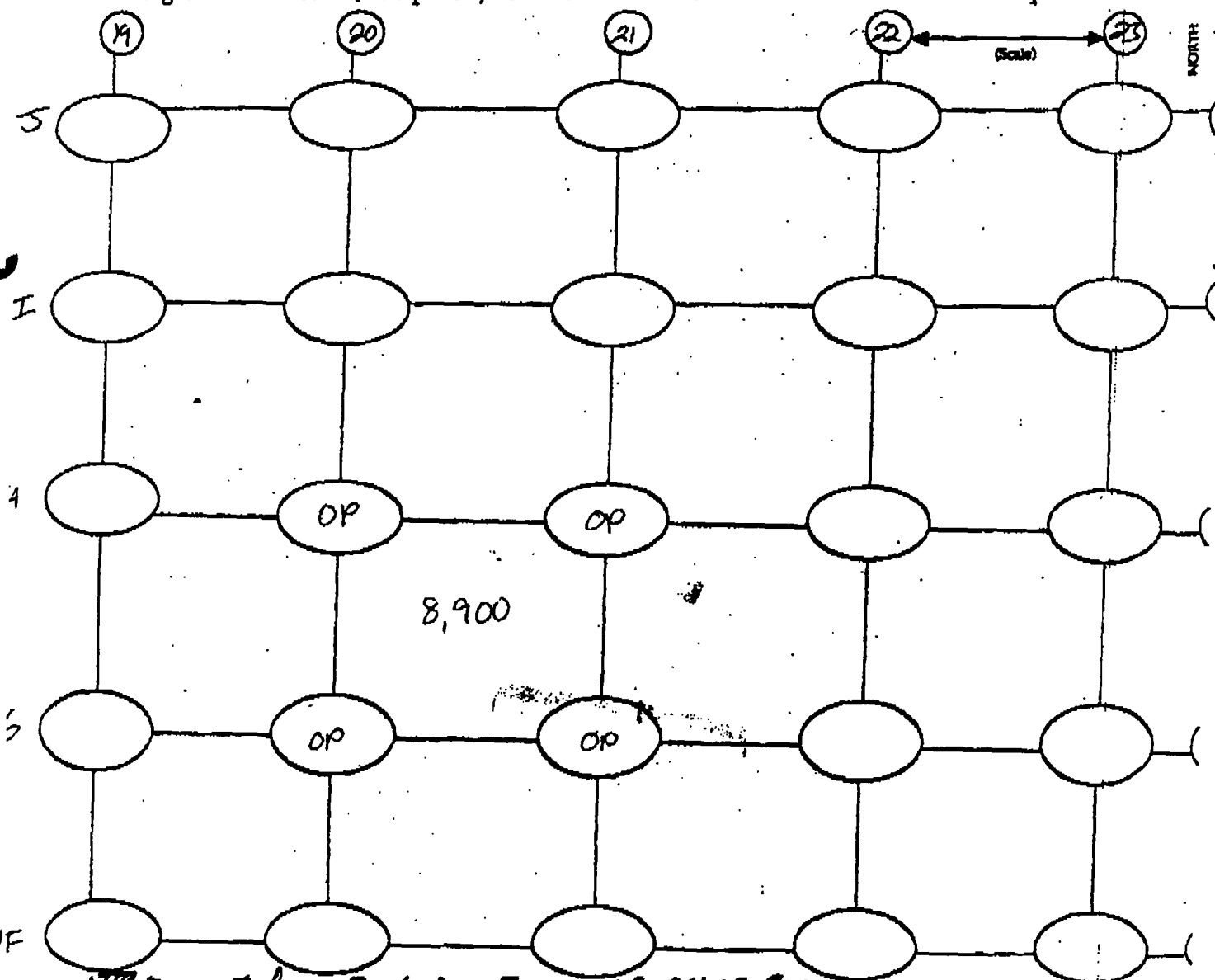
cpm

Action Level

21,072

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page

= Exclusion zone boundary NE = Not excavated SL = Slope



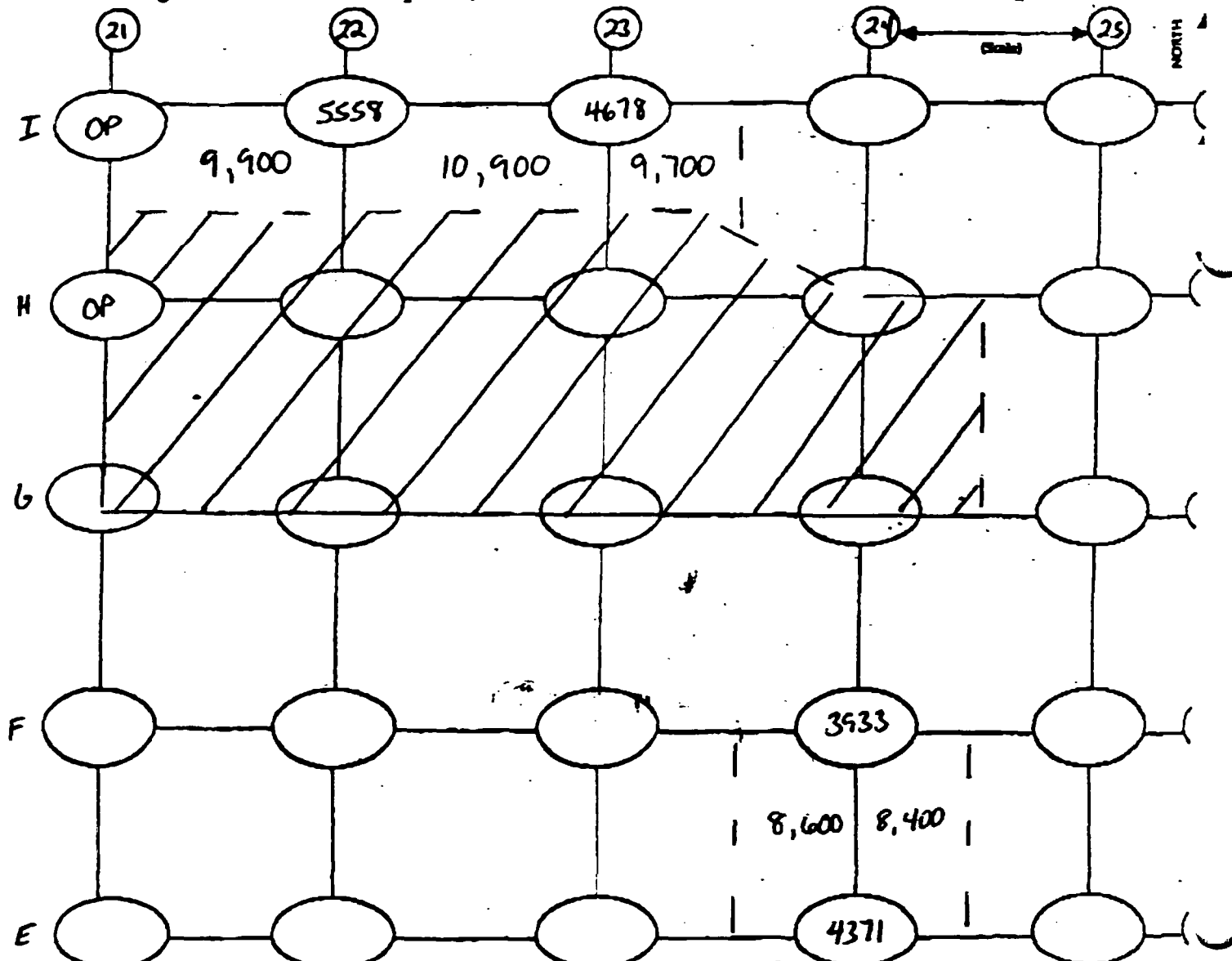
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/26/02 / 9/27/02Technician Jerry KraneInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground SK-7K cpm Action Level 21,012 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: OMAR Page
 25585 - Exclusion zone boundary NE = Not excavated SL = Slope



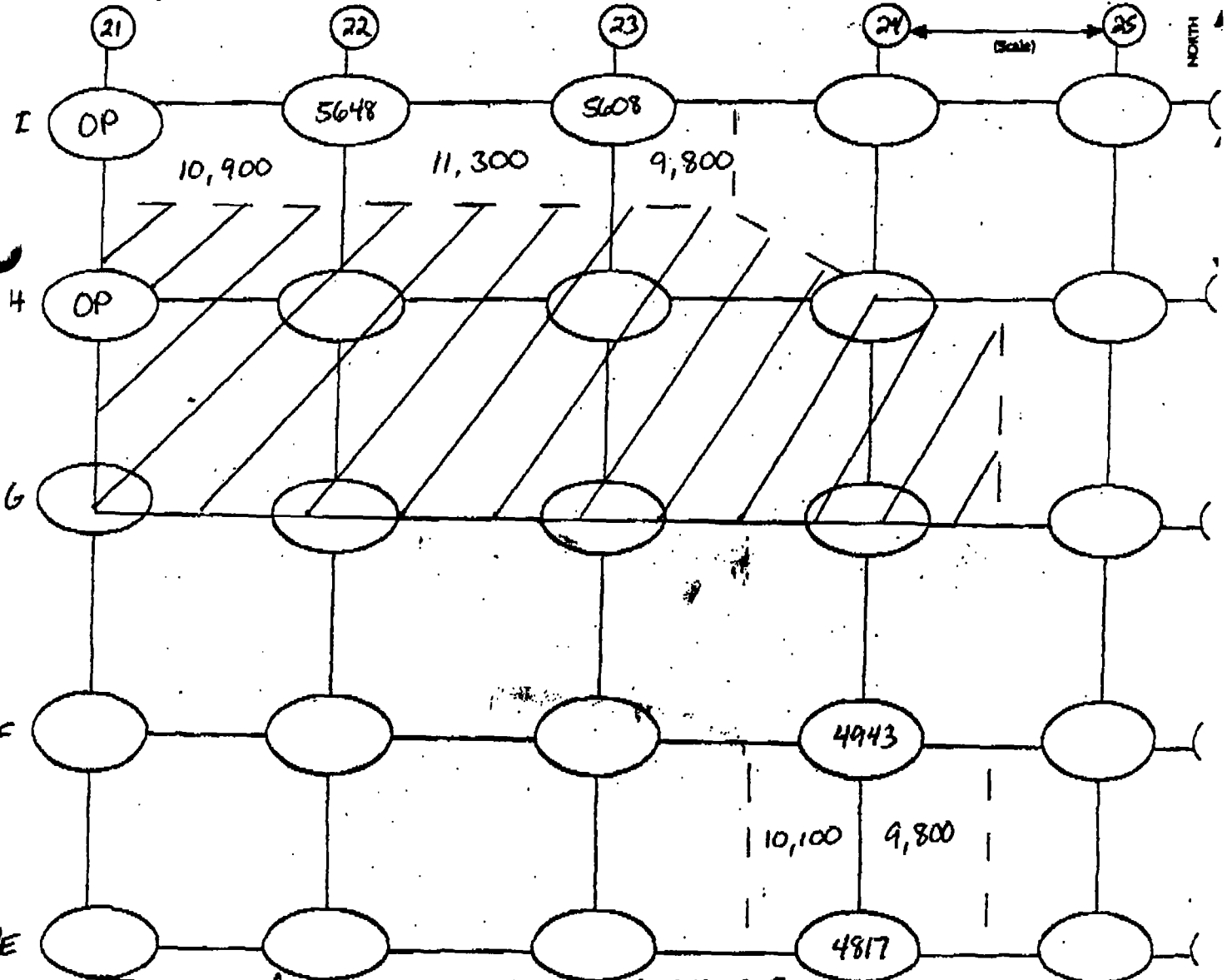
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 6

STS Consultants, Ltd.

Date 9/26/02 / 9/27/02Technician Serry KraucInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not ShieldedLift Elevation -1.5'Background 5k - 7k cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Other Page
 - Exclusion zone boundary NE: Not excavated SL = Slope



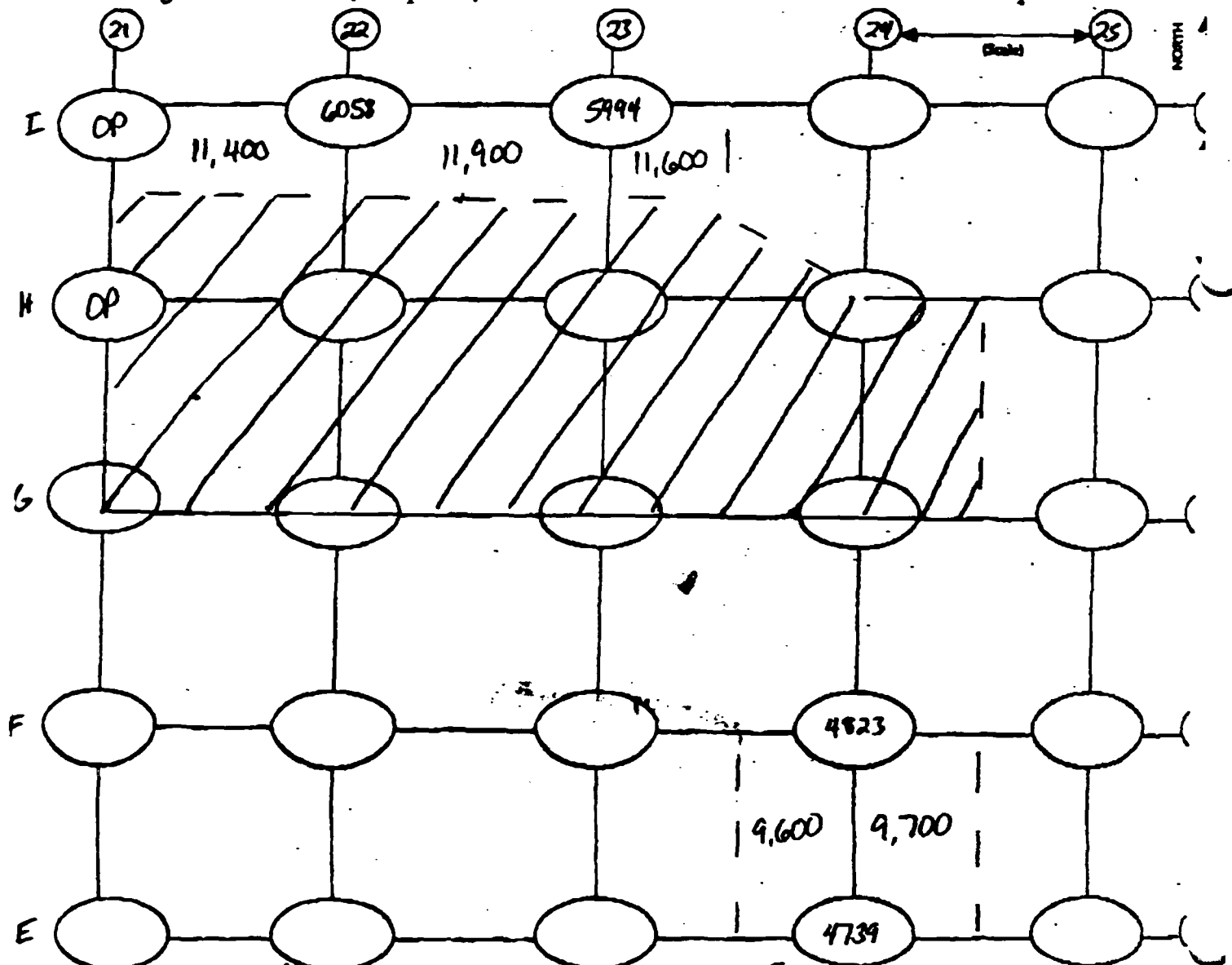
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 9/26/02 / 9/27/02Technician Jerry KrawInst. Model Ludlum 2221Serial No. 127242 168444Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3.0'Background SK-7K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Over Pass
 - Exclusion zone boundary NE: Not excavated SL: Slope



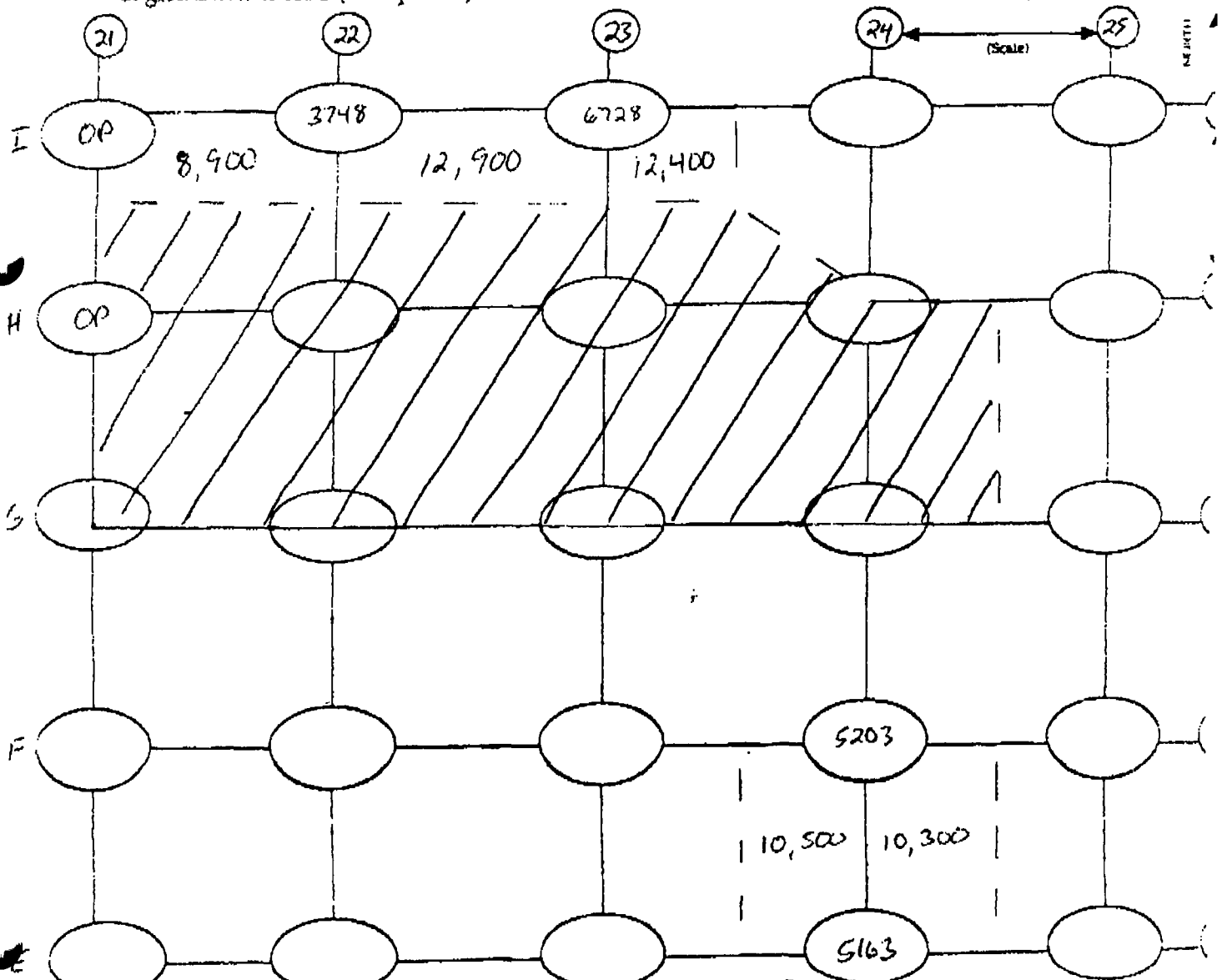
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/26/02 / 9/27/02Technician Jerry KrausInst. Model Ludlum 2221Serial No. meter # 127242 Probe # 168144Probe Type: 1"x1"NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background 5K - 7K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





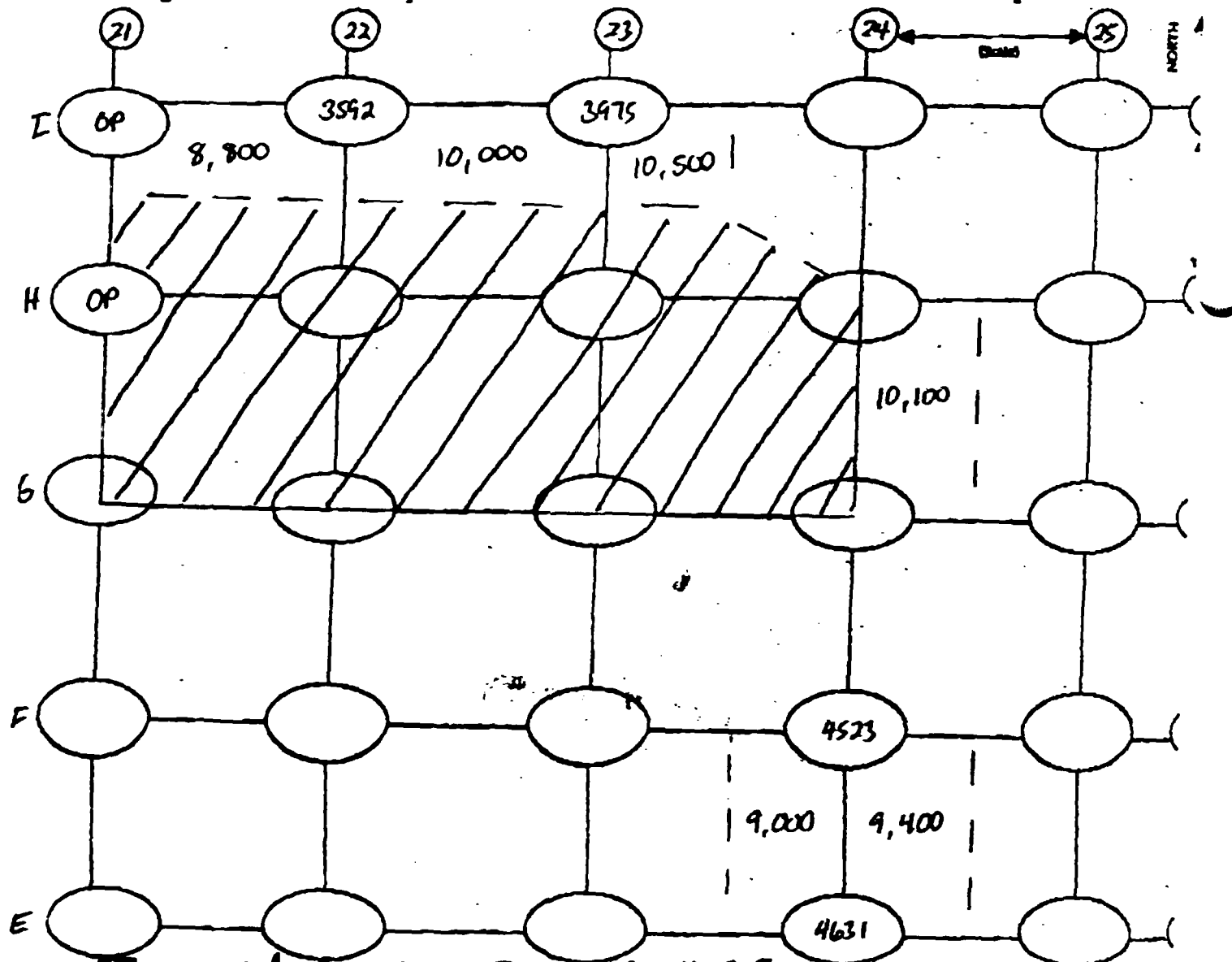
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants Ltd.

Date 9/26/02 / 9/27/02Technician Serry / KrausInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation - 6.0'Background SK - 7K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone or other use
Exclusion zone boundary NE = Not excluded SL = Slope



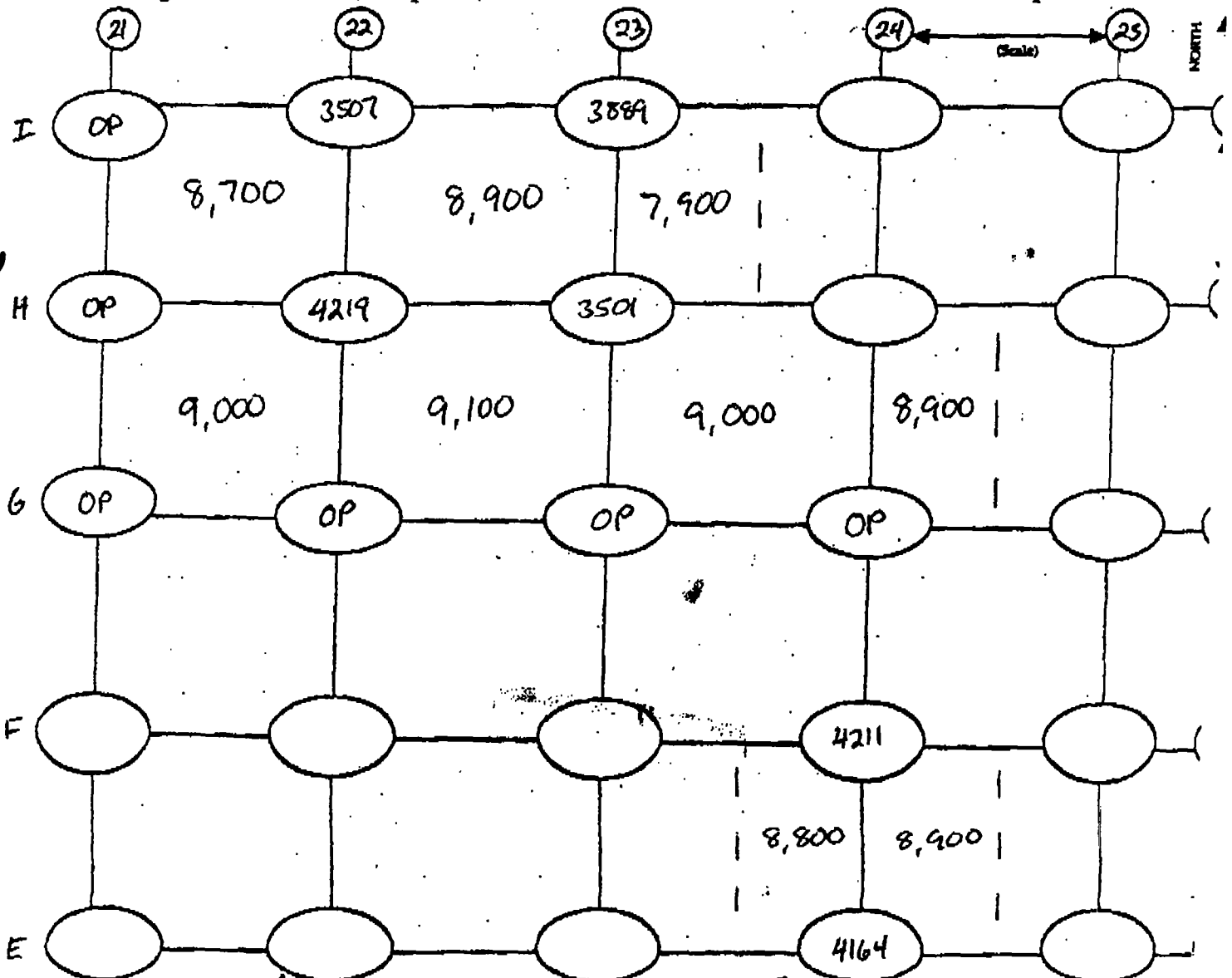
RADIATION SURVEY FORM

Project # 25585-KT Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/26/02 / 9/27/02Technician Jerry KrausInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background Sk -7k cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Phase
 --- = Exclusion zone boundary NE = Not excavated SL = Slope



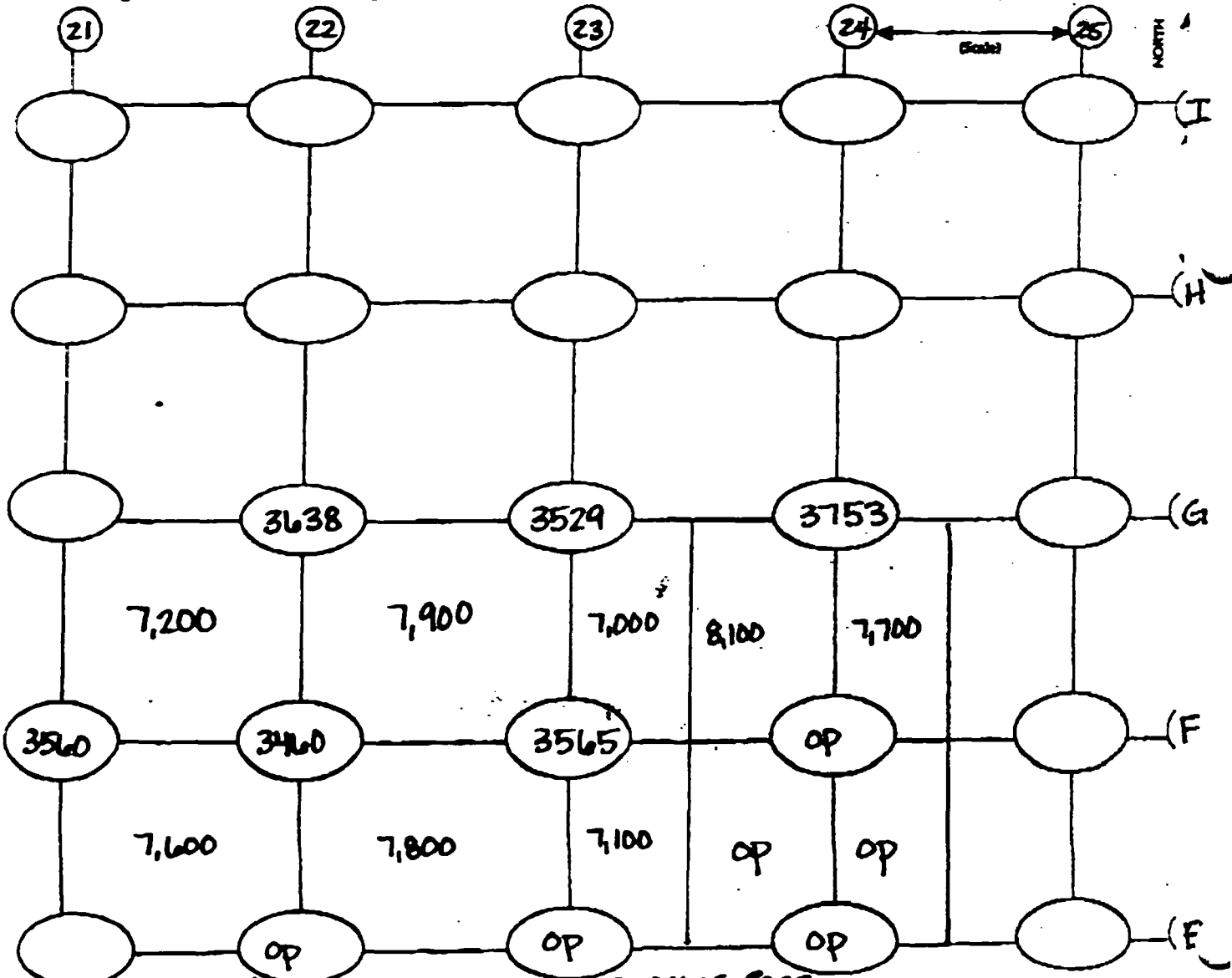
RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/26/02 & 9/30/02Technician L. AschimInst. Model Ludlum 2221meters # Probe #
Serial No. 132844 / 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation surfaceBackground 5-7 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Over Pass
 = Exclusion zone boundary NE = Not excavated SL = Slope



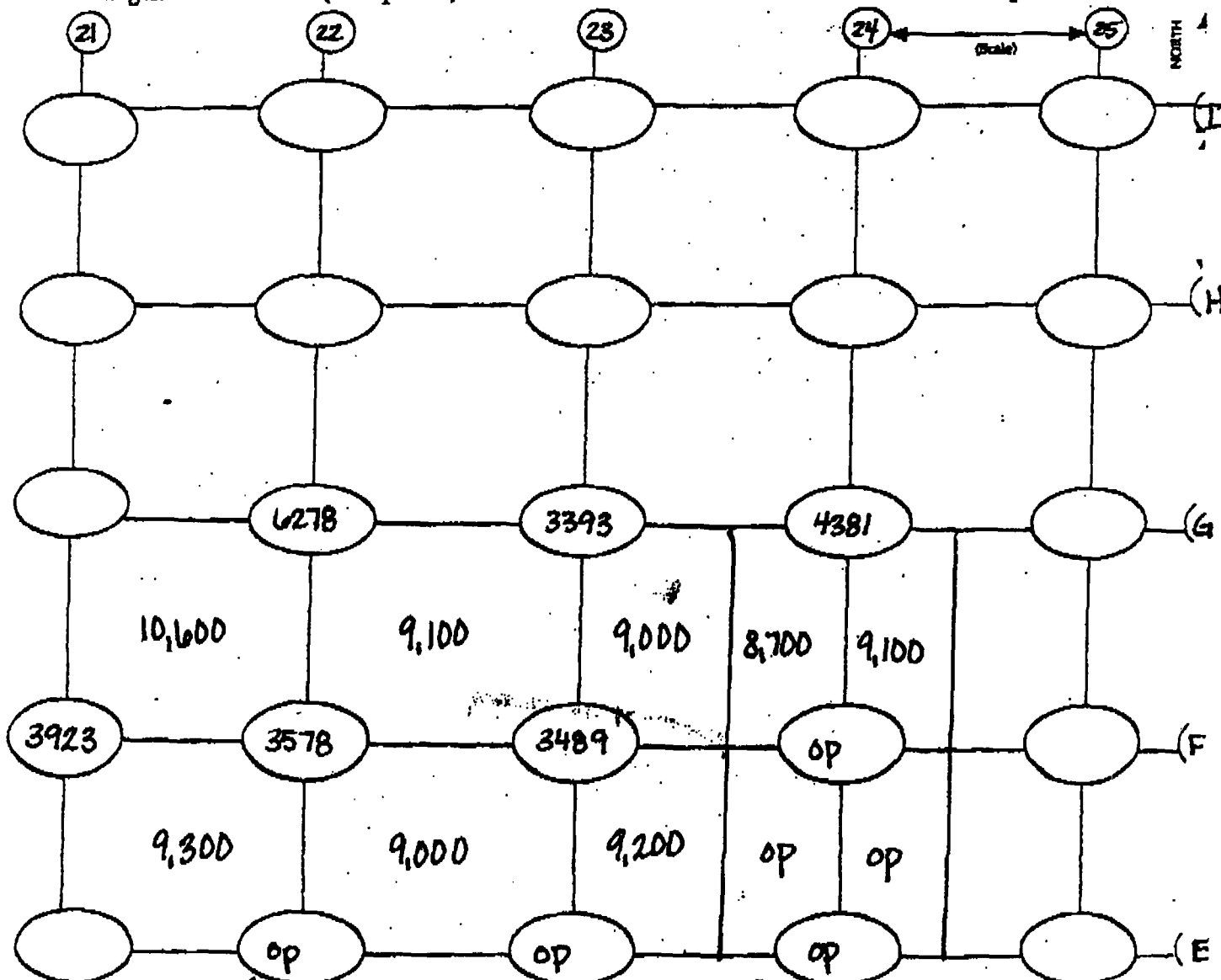
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 9/26/02 & 9/30/02Technician L. AschimInst. Model Ludlum 2221Meter # 132844 Probe # 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5Background 5-7 14 cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone or other use
 * = Exclusion zone boundary NE = Not excavated SL = Slope

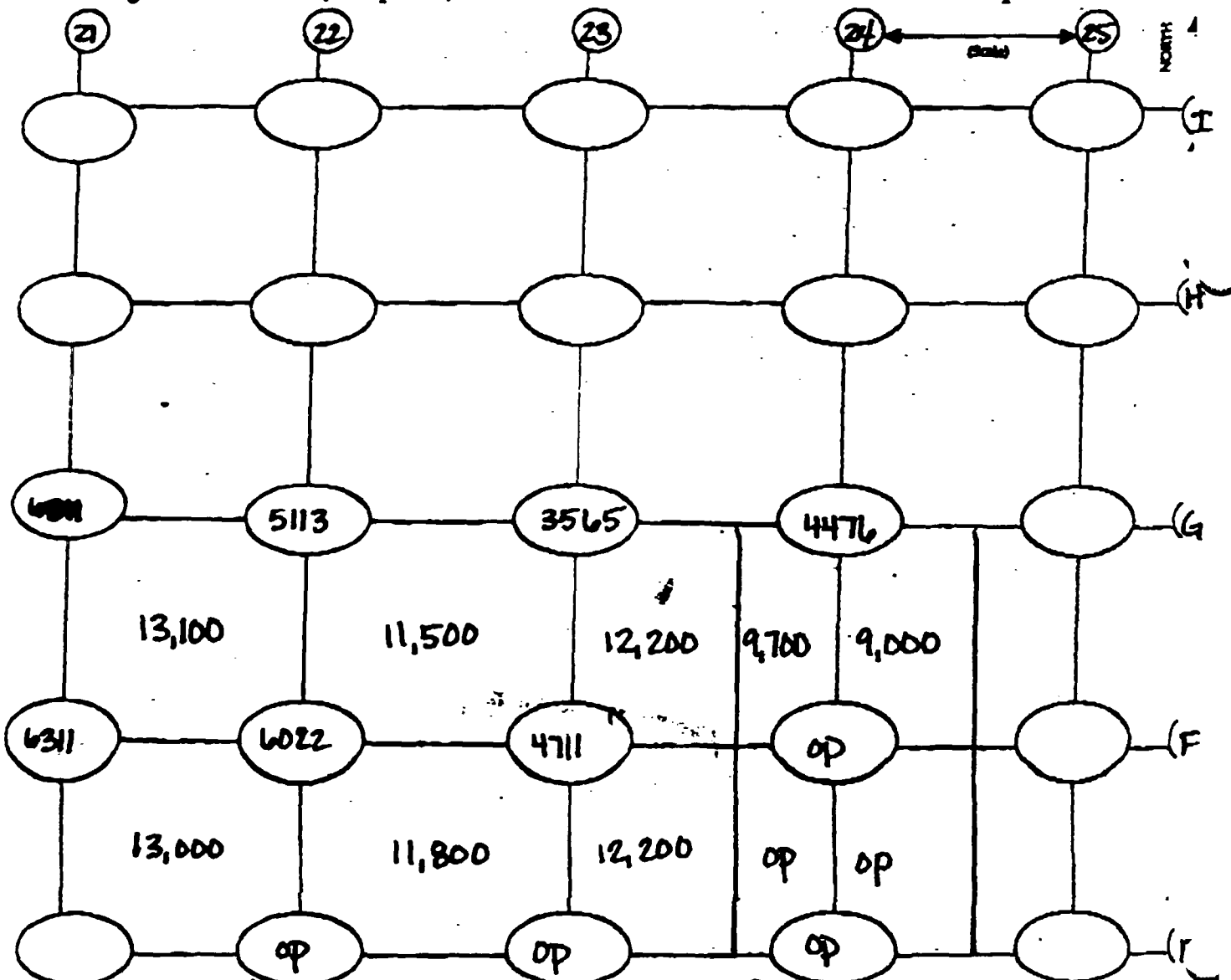


RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XI Project Name GMO Page 3 of 6Date 9/21/02 & 9/30/02Technician L. AschimInst. Model Ludlum 2221meter # Probe 25
Serial No. 132844 / 1108148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 5-7 K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone OP: Other Page
 E = Exclusion zone boundary NE = Not excluded SL = Slope



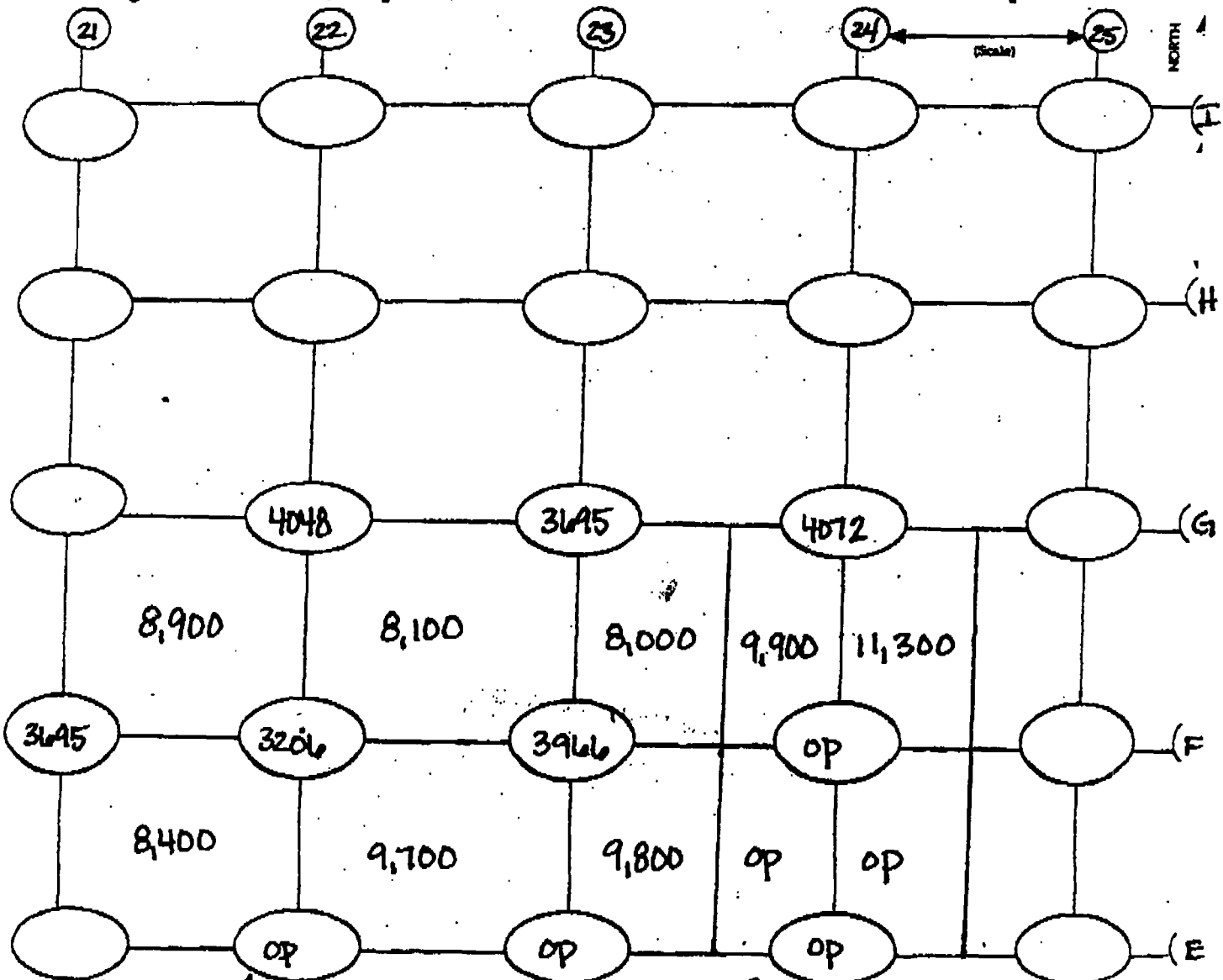
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/26/02 & 9/30/02Technician L. AschimInst. Model Ludlum 2221Serial No. 132844 / 168148Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -4.5Background 5-7 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 F=Exclusion Zone Boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

STS Consultants, Ltd.

Project # 25585-XIProject Name GMOPage 5 of 6

Date

9/26/02 & 9/30/02

Technician

L. Aschim

Serial No.

meter #

Probe #

132844168148

Lift Elevation

-6'

Probe Type:

1"x1" NaI2"x2" NaIShieldedNot Shielded

Background

5-7 K

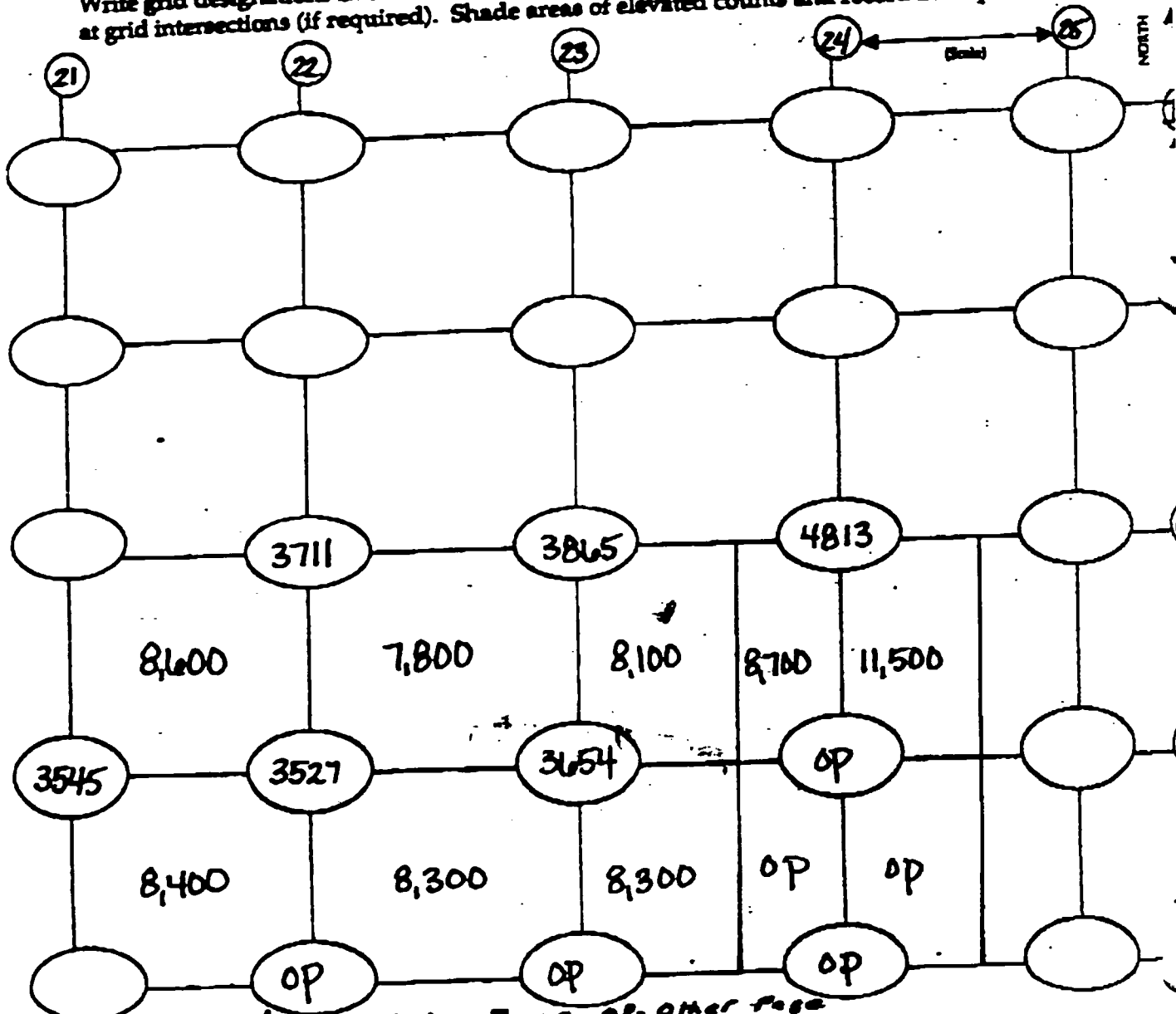
cpm

Action Level

20,909

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP = Other Page
 --- = Exclusion zone boundary NE = Not excavated SL = Slope



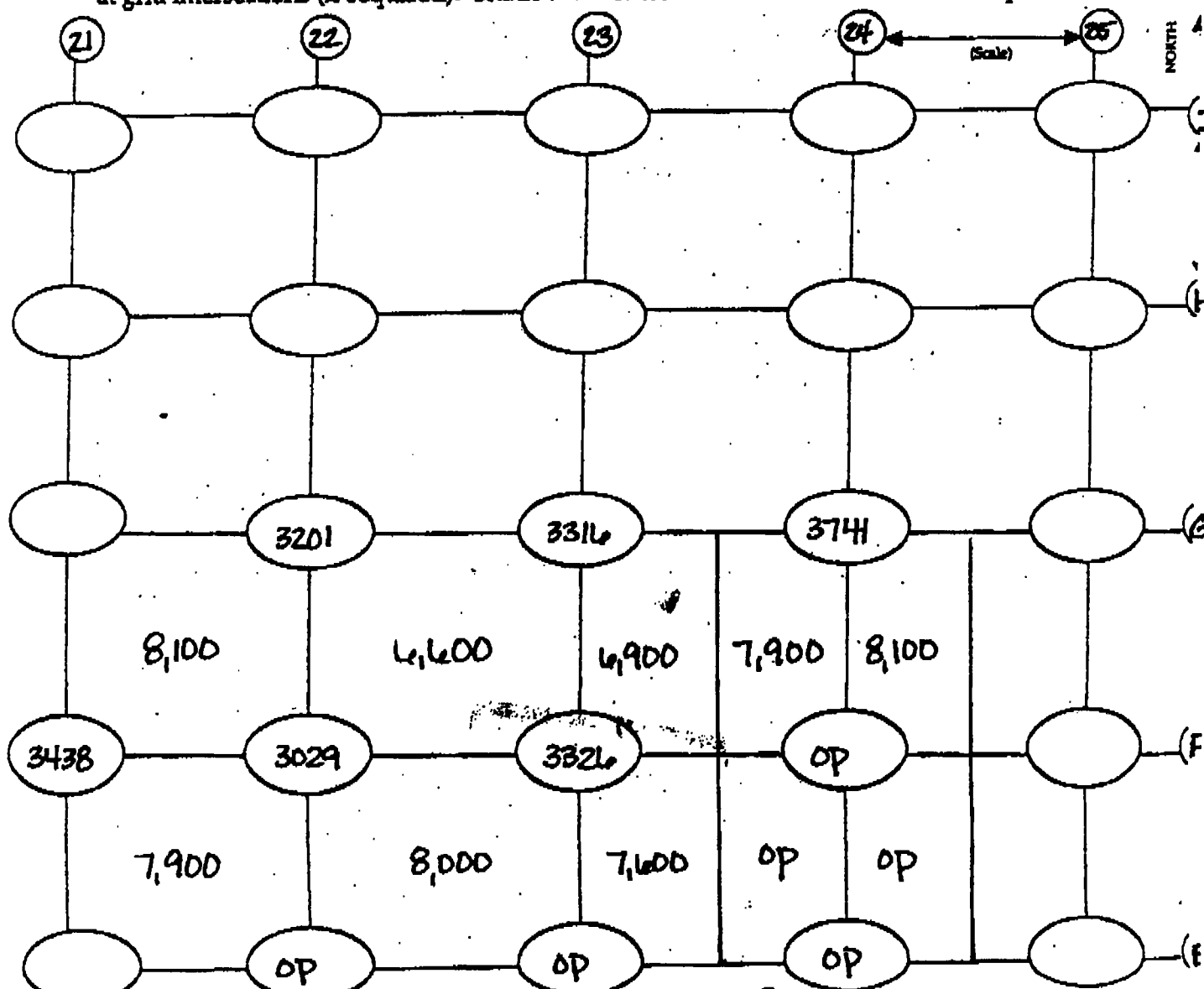
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 6 of 6

STS Consultants, Ltd.

Date 9/26/02 & 9/30/02Technician L. AschmInst. Model Ludlum 2221Serial No. 132844 / 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background 5-7 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Pass
Exclusion zone boundary NE=Not excavated SL=Slope



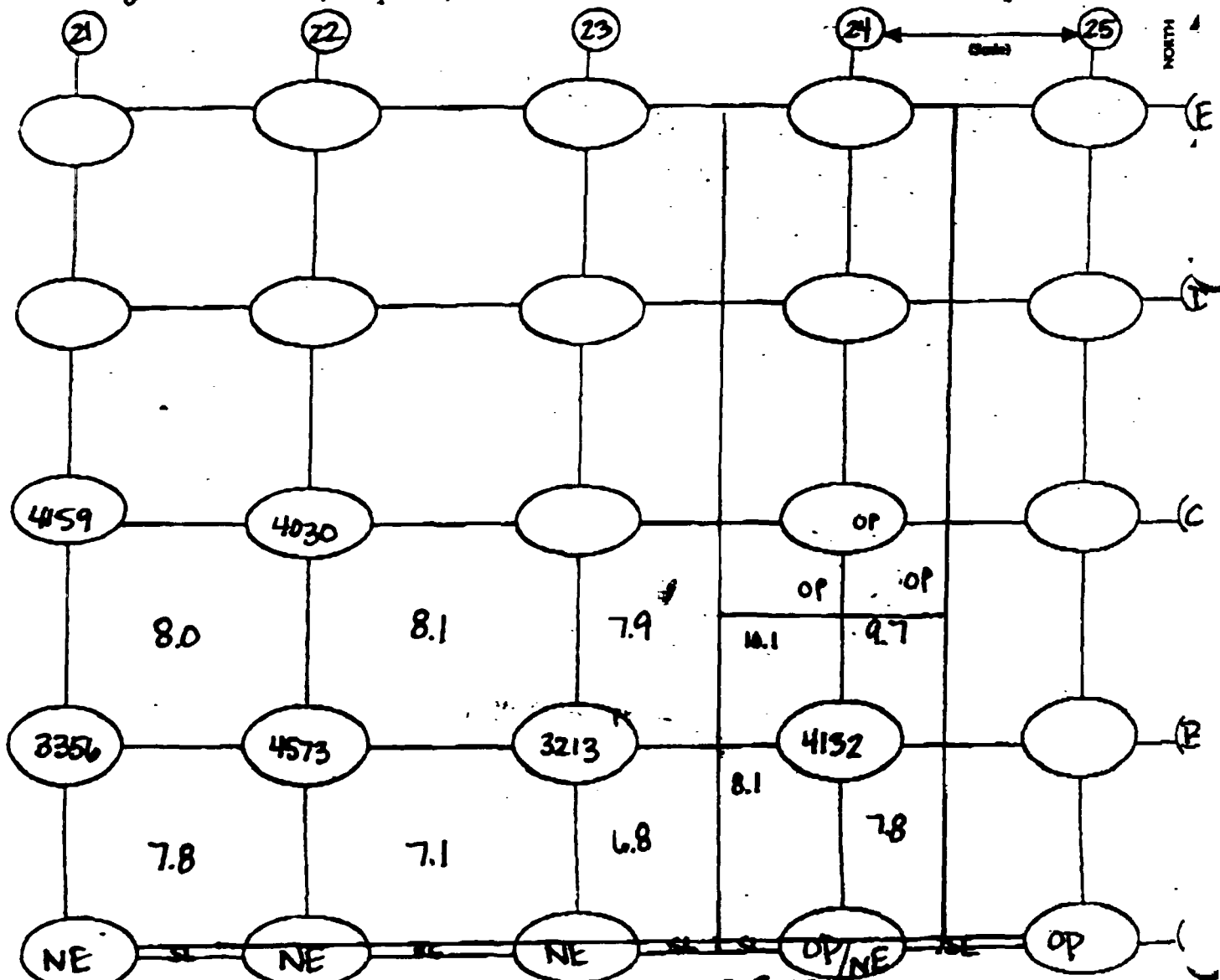
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 1 of 6

STS Consultants, Ltd.

Date 9/27/02Technician AschimInst. Model Ludlum 2221meter # 132844 Probe # 1168148Probe Type 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 5-7K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



NE = Not excavated SL = Slope
 OP = Other phase
 Excluded as Exclusion Zone
 Exclusion zone boundary



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 6

STS Consultants, Ltd.

Date

9/27/02

Technician

Aschim

Inst. Model

Ludlum 2221

Serial No.

132844meter # 1168148

Probe Type:

1"x1" Nal2"x2" NalShieldedNot Shielded

Lift Elevation

-1.5

Background

5-7 K

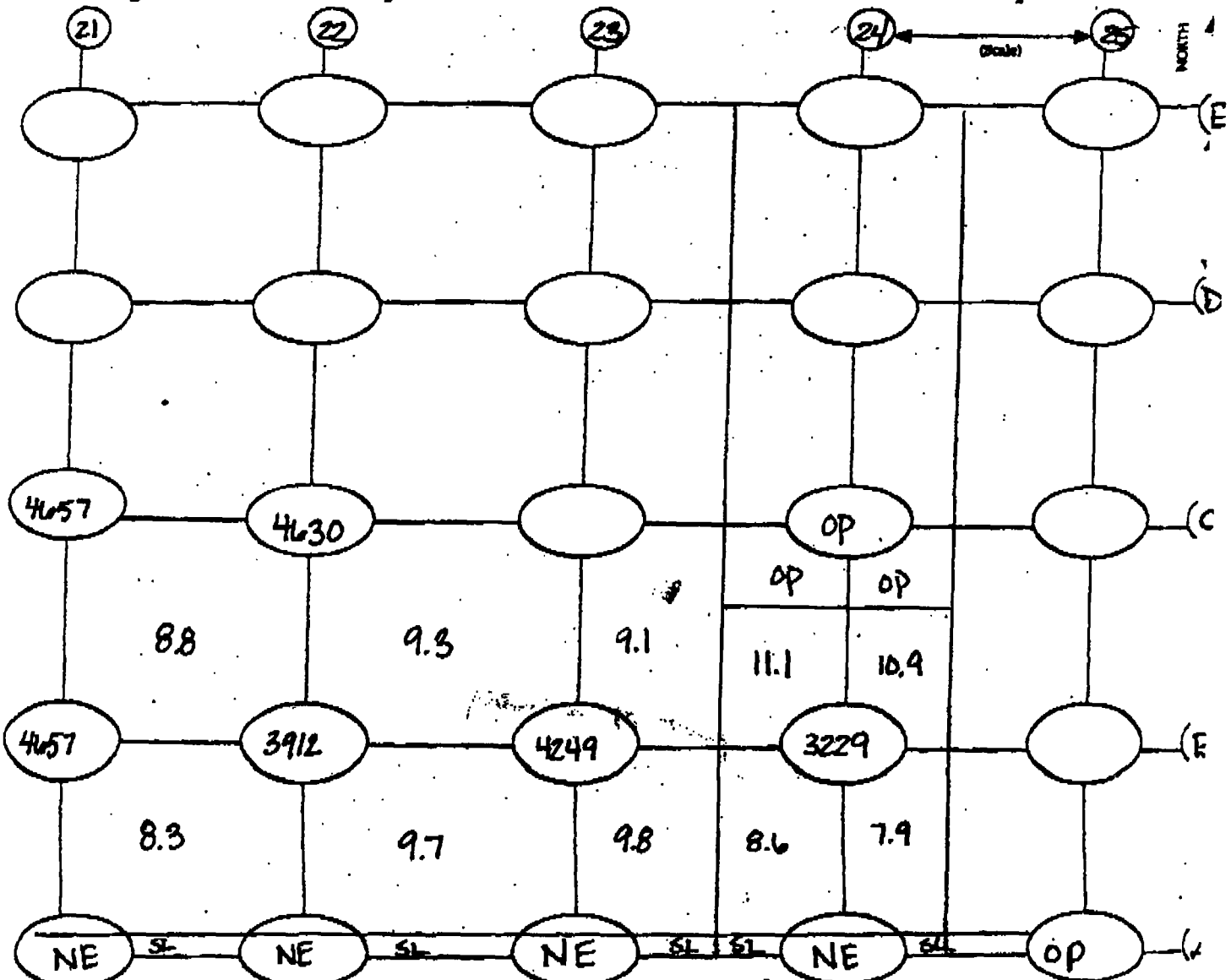
cpm

Action Level

29909

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page
 SL=Exclusion zone boundary NE=Not excavated SL=Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 3 of 6

STS Consulting, Ltd.

Date

9/27/02

Inst. Model

Ludlum 2221

Probe Type

1"x1" NaI2"x2" NaIShieldedNot Shielded

Technician

Aschim

Serial No.

meter #Probe #1328441168148

Lift Elevation

-3

Background

5-7K

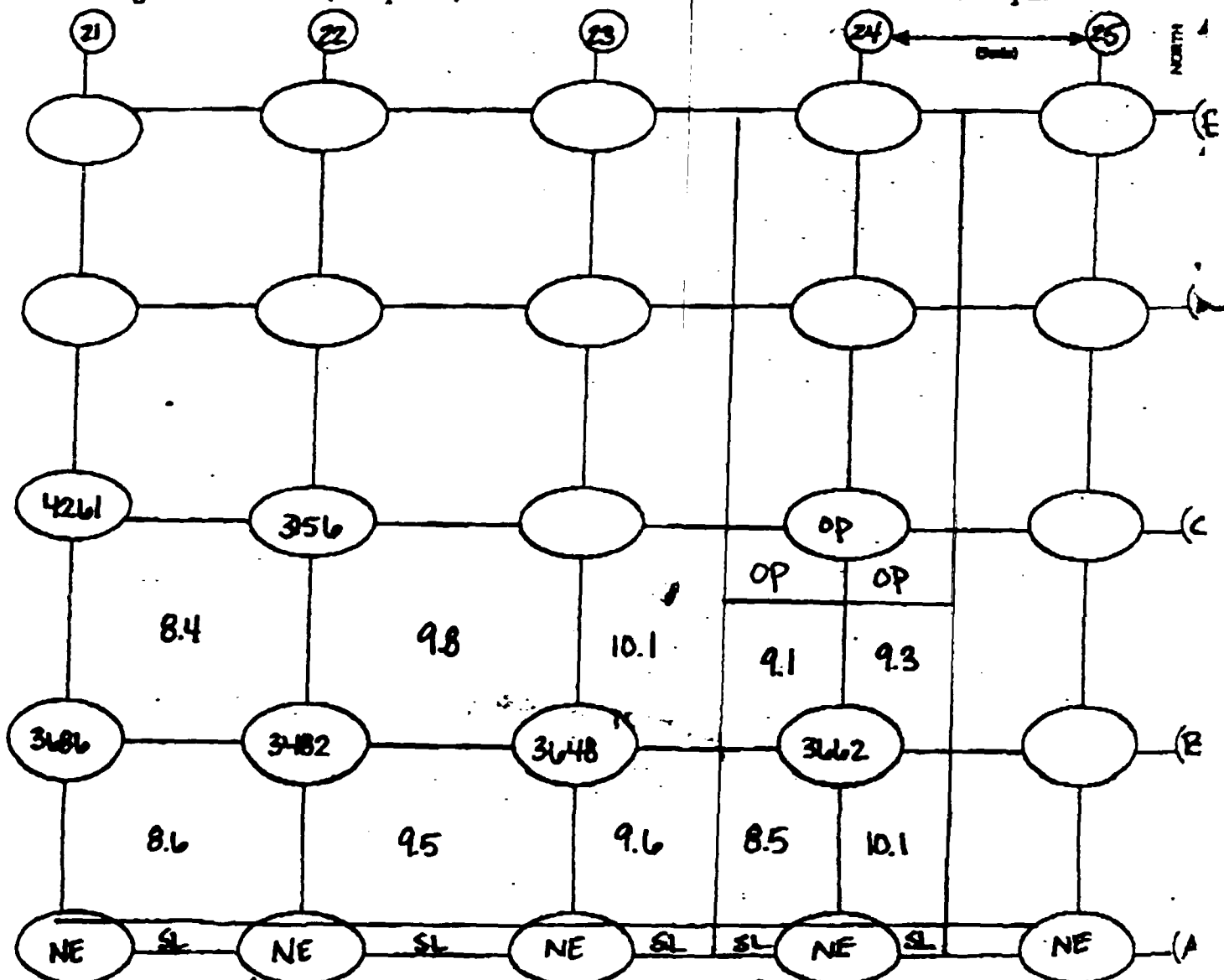
cpm

Action Level

20,909

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP: Over pass
Exclusion zone boundary NE=NOT excavated SL=Slope



RADIATION SURVEY FORM

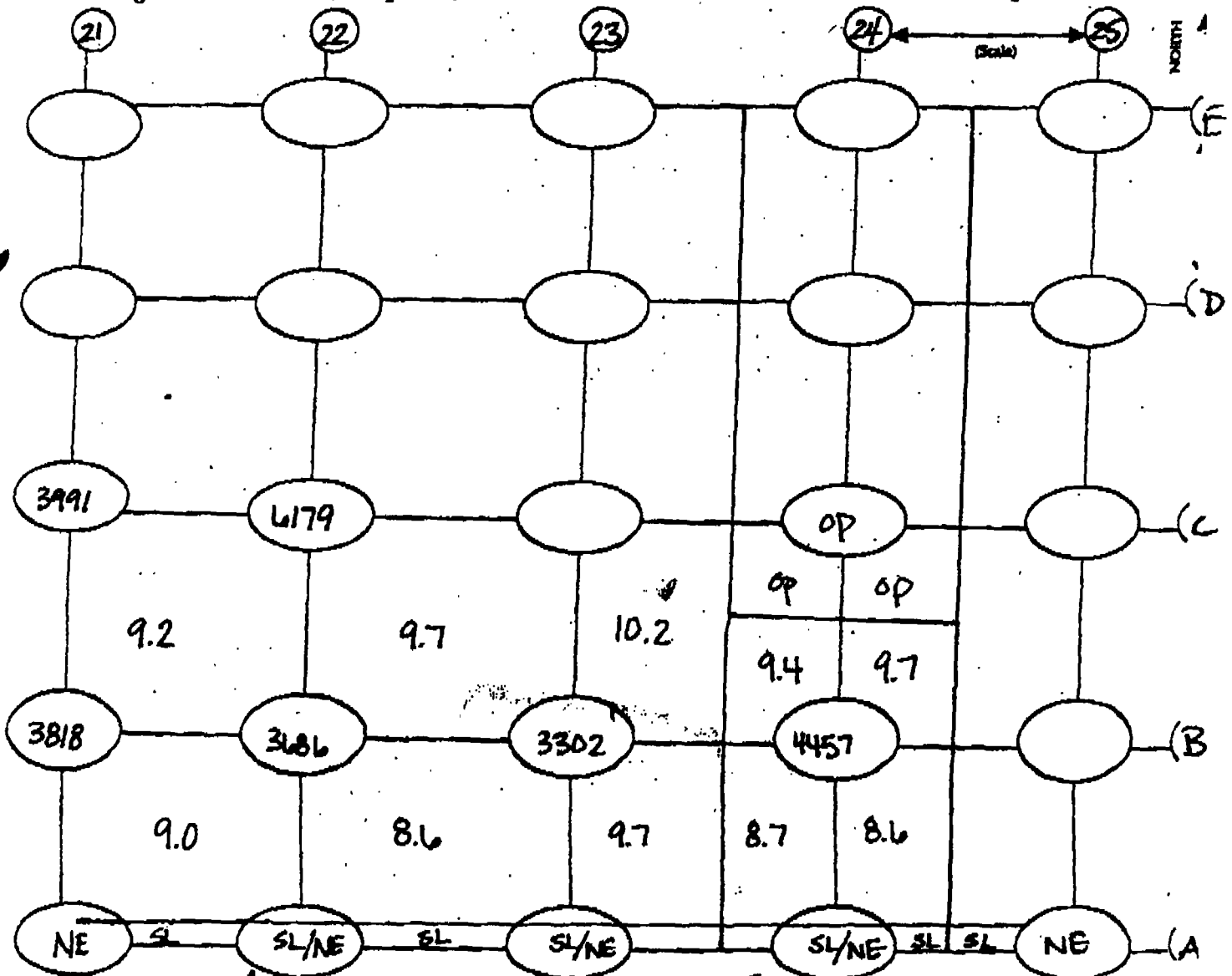
 Project # 25585-XI Project Name GMO Page 4 of 6

STS Consultants, Ltd.

Date 9/17/02Technician AschimInst. Model Ludlum 2221
 meter # 132844 Probe # 168148
 Serial No.

 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation -45Background 5-7 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone of other pass
 NE = Not excavated SL = Slope



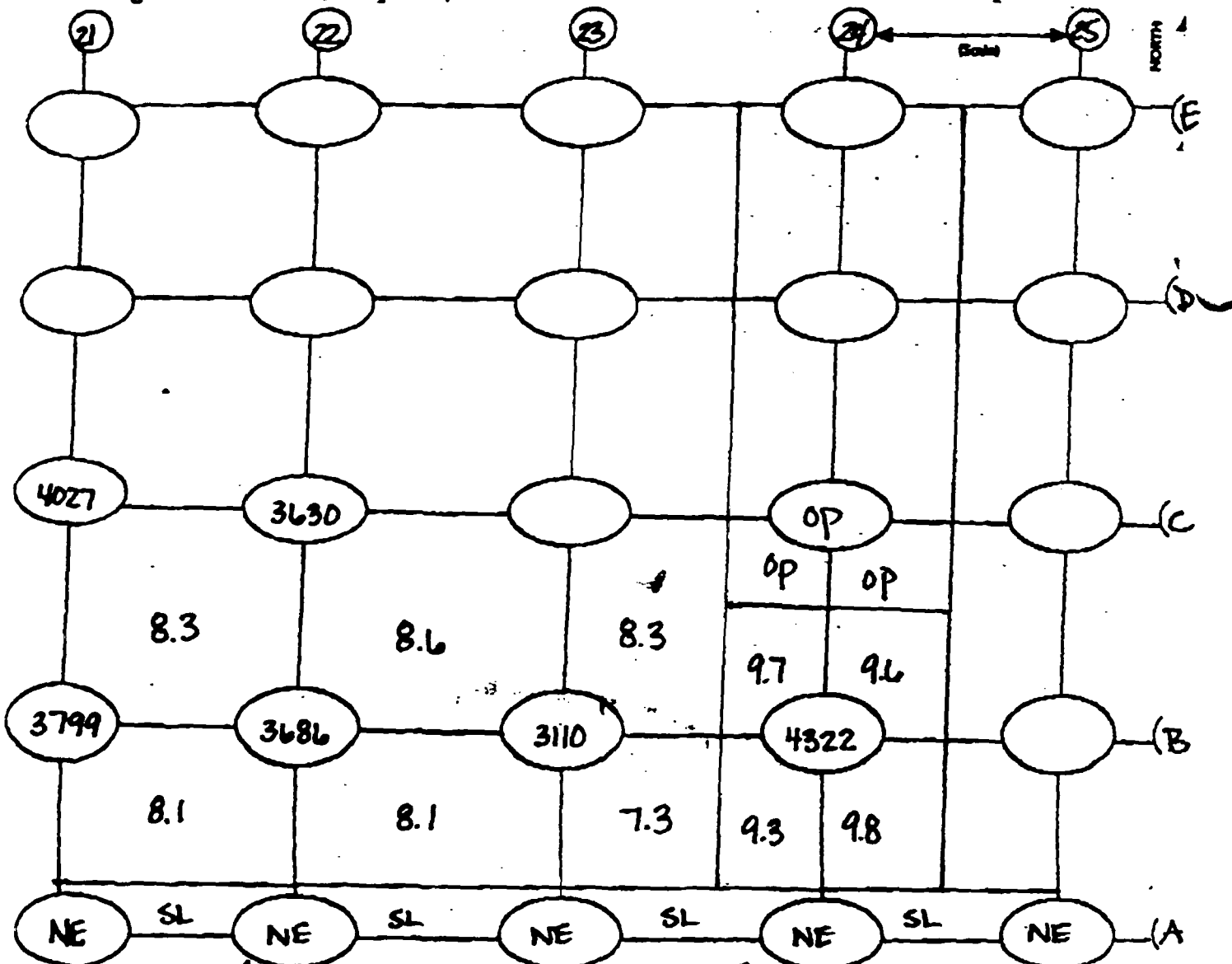
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 9/27/02Technician AschimInst. Model Ludlum 2221Serial No. 132844 / 168148Probe Type: 1x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6Background 5-7 K cpm Action Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP, OMR, P, etc.

Excavation zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 9/27/02

Inst. Model Ludlum 2221

Probe Type: 1'x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Technician Aschim

Serial No. 132844 / 168148

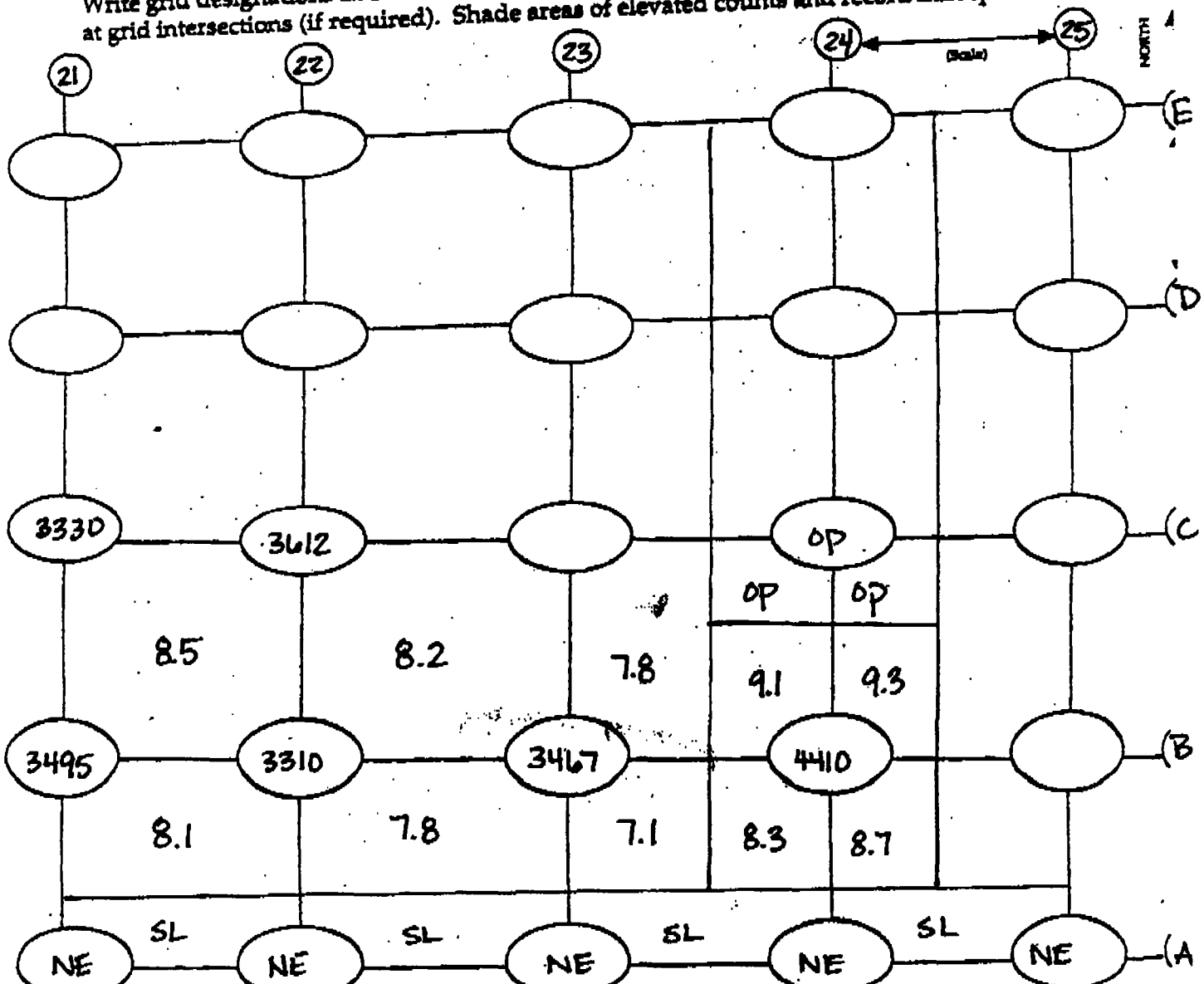
Lift Elevation -7.5

Background 5-7 K cpm. Action Level 20,909 cpm

Background 5-1R

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

(22) (24) (25)



Excavated as Exclusion Zone of other phase
* * * Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 1 of 6

STS Consultants, Ltd.

Date 9/30/02 / 10/01/02

Technician Jerry Krause
meter # Probe #

Inst. Model Ludlum 2221

Serial No. 127242 168144

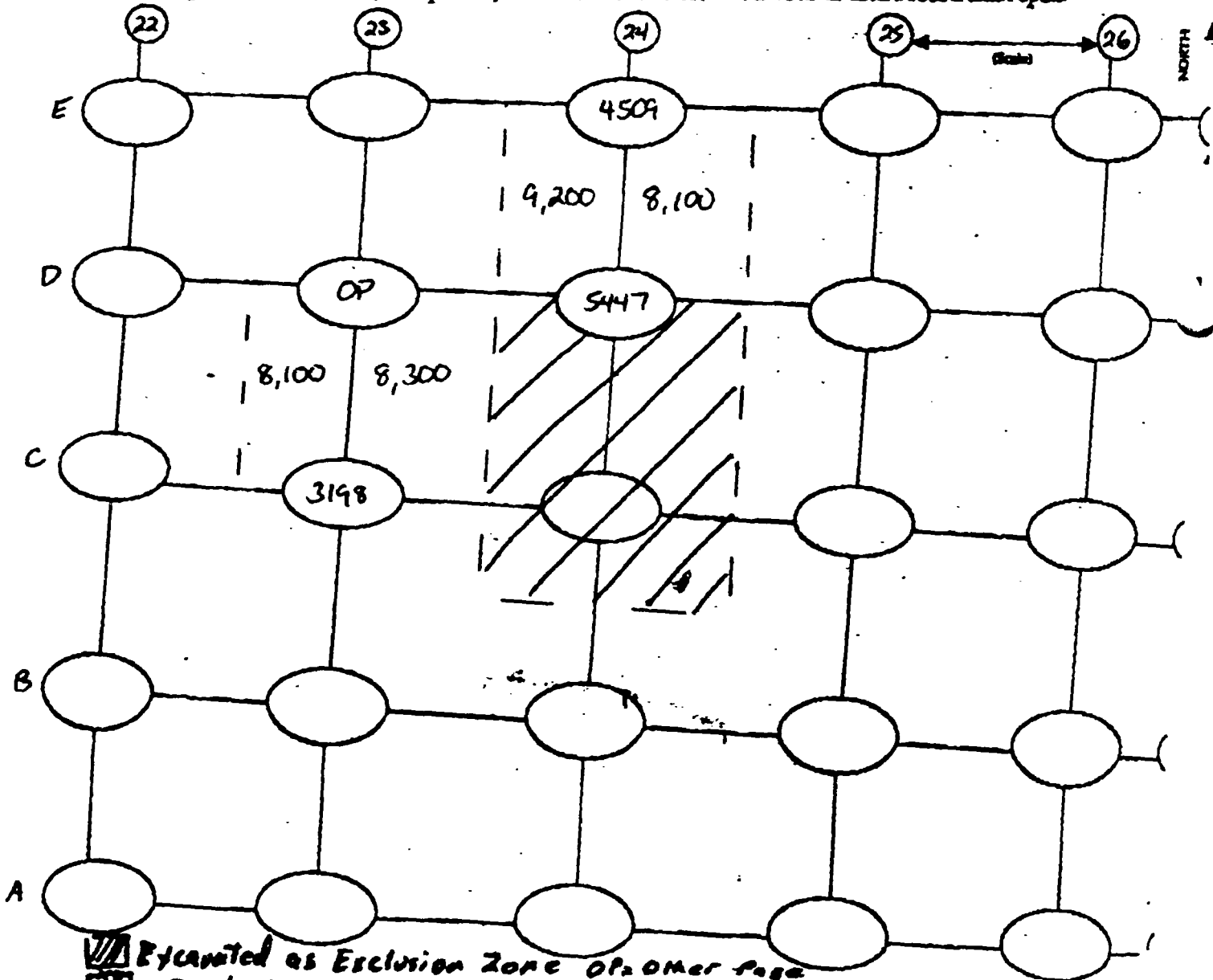
Probe Type: 1"x1"Nal / 2"x2"Nal
Shielded / Not Shielded

Lift Elevation Surface

Background Sk - 7K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone of Omer Pass
Exclusion zone boundary NE = Not excluded SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI

Project Name GMO

Page 2 of 6

STS Consultants, Ltd.

Date 9/30/02 / 10/01/02

Technician Jerry Krave

Inst. Model Ludlum 2221

meter # 127242 Probe # 168144

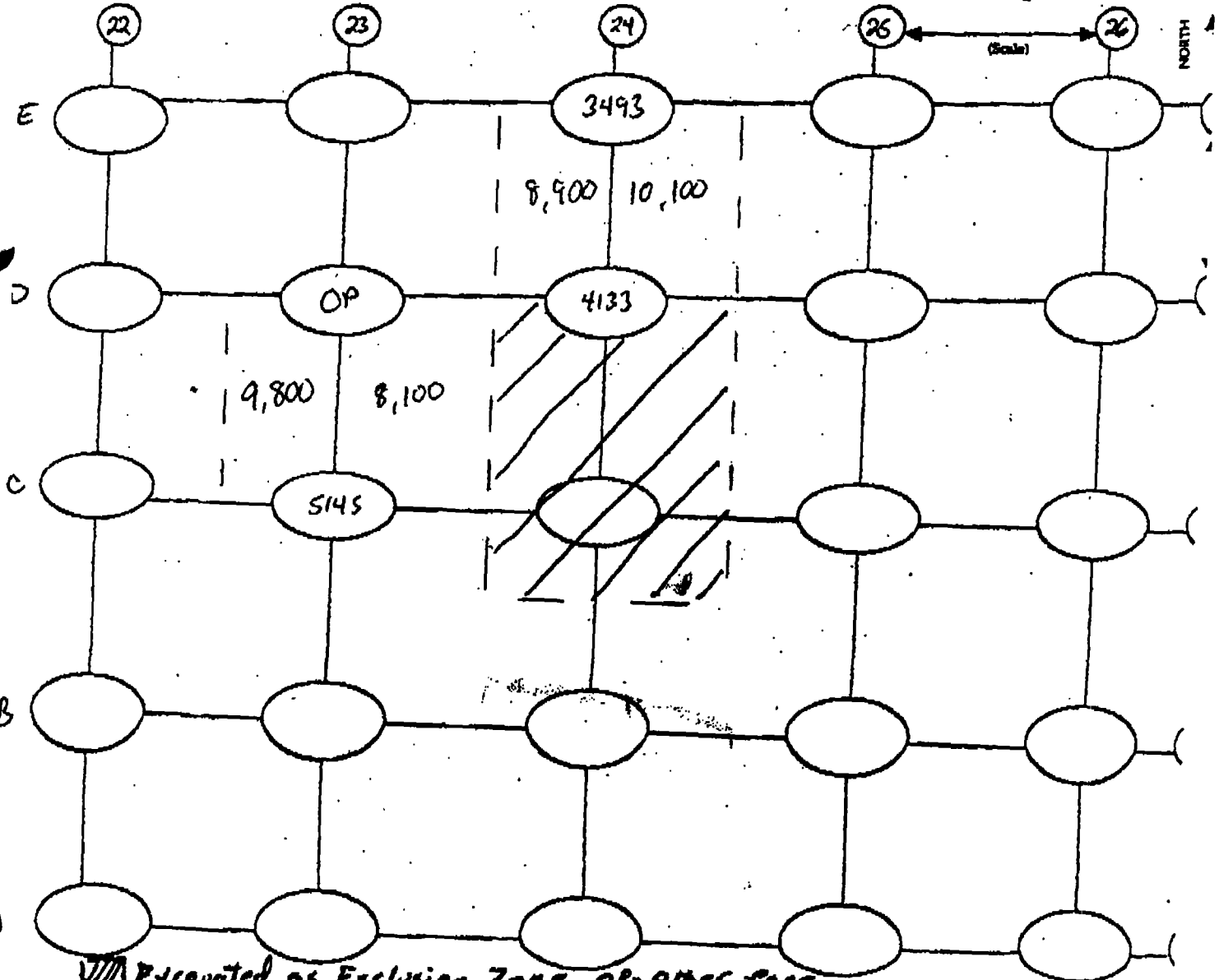
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation -1.5'

Background 51K - 71K cpm

Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consulting, Ltd.

Date 9/30/02 / 10/01/02

Technician Jerry Kraus

Inst. Model Ludlum 2221

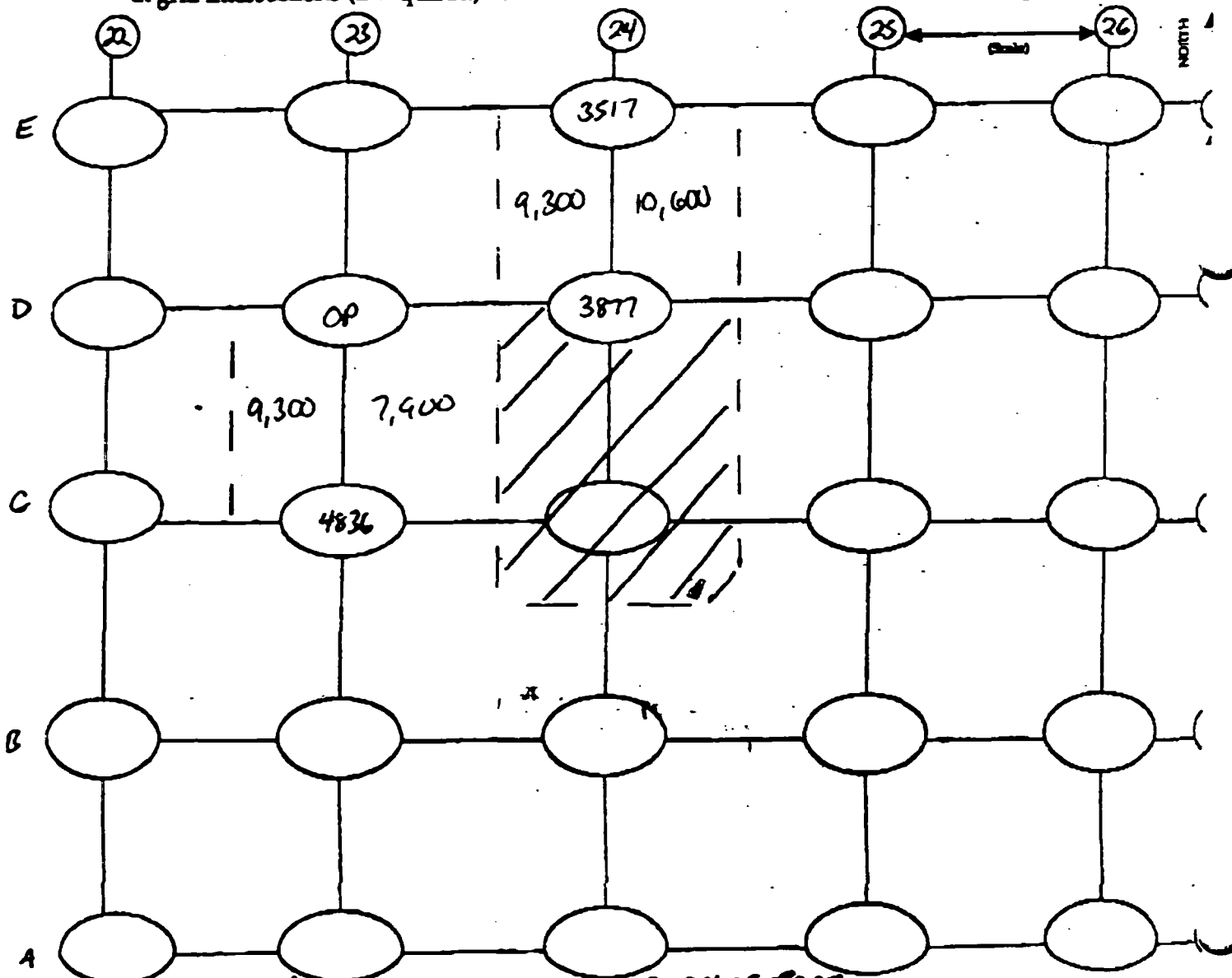
material	Probe 28
Serial No. 127242	168144

**Probe Type: 1"x1" Nal / 2"x2" Nal
Shielded / Not Shielded**

Lift Elevation -3.0'

Background SK-71C cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP= Other Page
SL= Exclusion zone boundary NE= Not excavated SL= Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 6

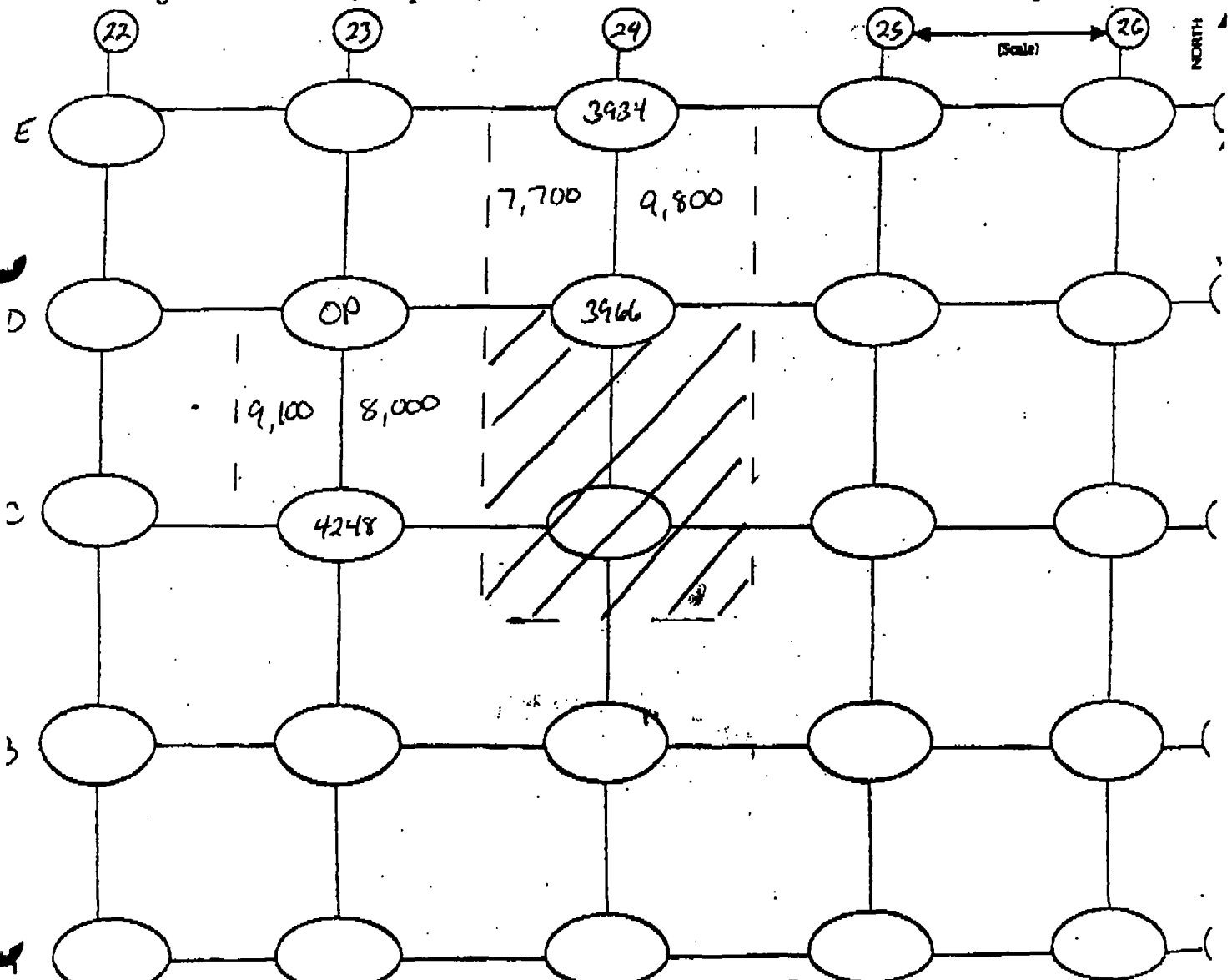
STS Consultants, Ltd.

Date 9/30/02 / 10/01/02Technician Jerry KrausInst. Model Ludlum 2221

meter #	Probe #
127242	168144

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -4.5'Background Sk-7k cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone (Diagonal lines)
 - Exclusion zone boundary NE = Not excavated SL = Slope



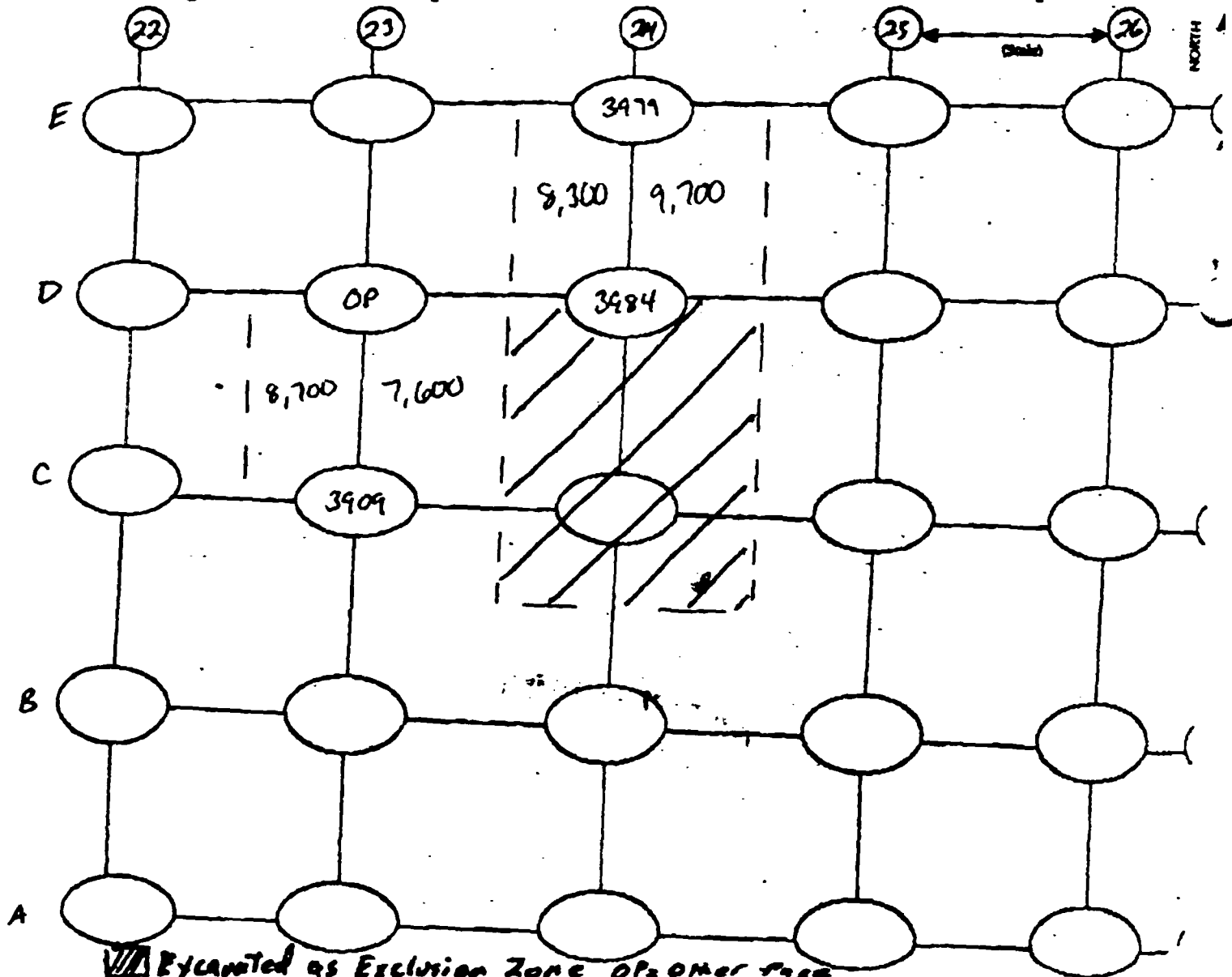
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consulting, Ltd.

Date 9/30/02 / 10/01/02Technician Jerry Kraw
meter # Probe #Inst. Model Ludlum 2221Serial No. 127242 168144Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -6.0'Background 5K-7K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

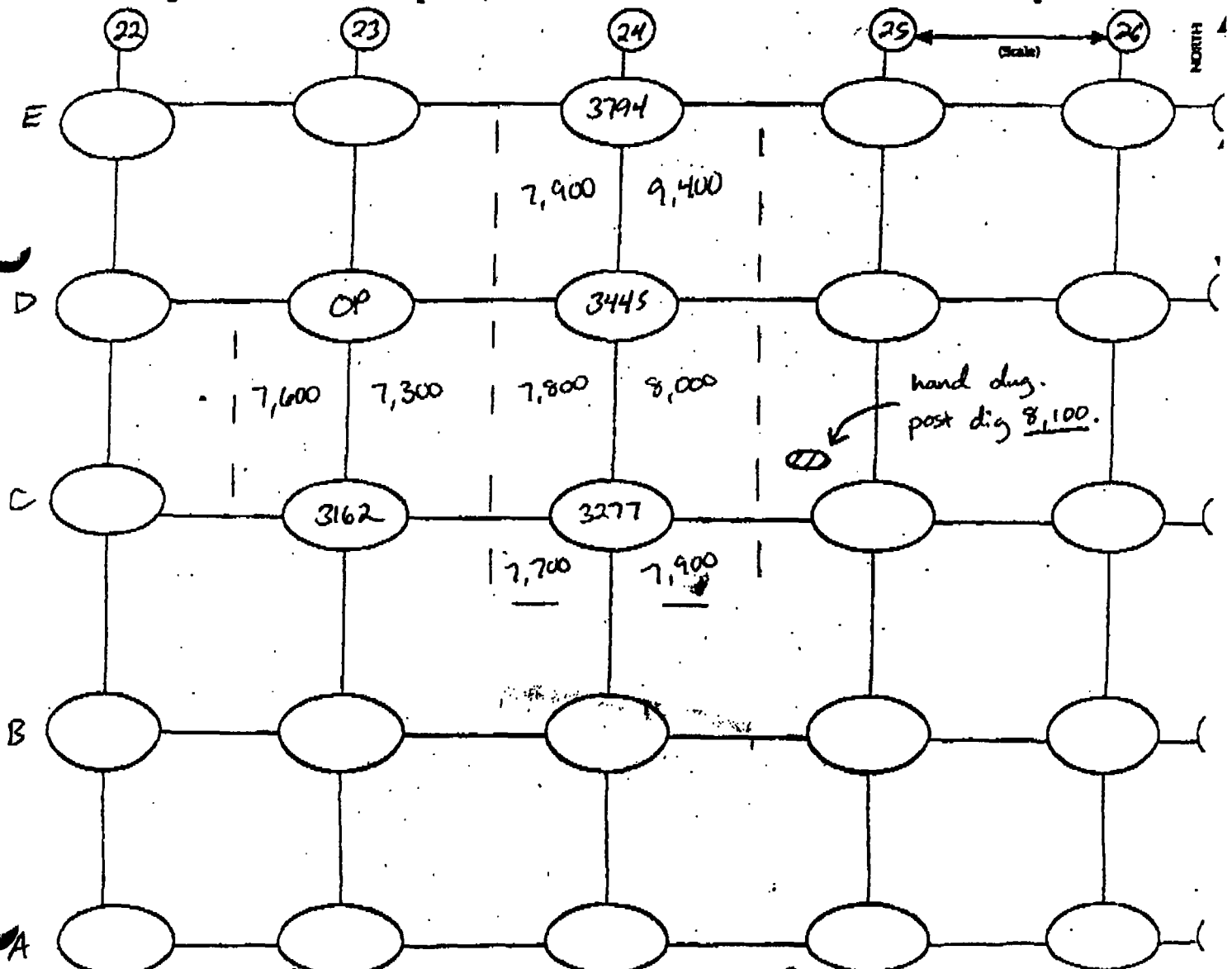
STS Consultants, Ltd.

Date 9/30/02 / 10/01/02Technician Serry Krone
meter # / Probe #Inst. Model Ludlum 2221

Serial No. _____

Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7.5'Background SK - 7K cpm Action Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Probe
 NE = Not excavated SL = Slope



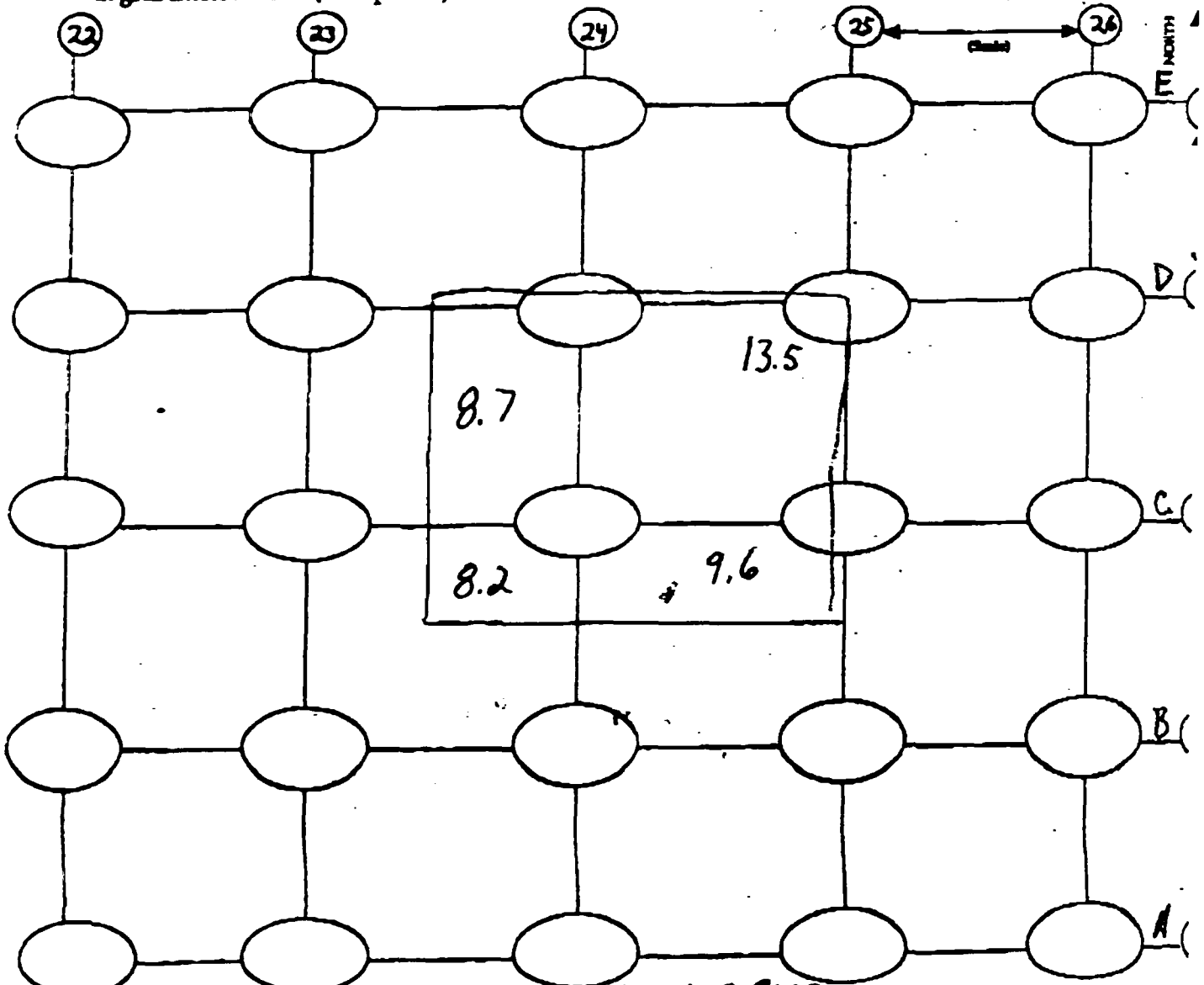
RADIATION SURVEY FORM

 Project # 25585-XI Project Name GMO Page 1 of 1

STS Consultants, Ltd.

Date 10/1/02Technician Tim O'BrienInst. Model Ludlum 2221Serial No. 127242 / 168144
 Probe Type: 1"x1" NaI / 2"x2" NaI
 Shielded / Not Shielded
Lift Elevation Pre EPABackground 7.8K cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone or other use
 NE = Not excluded SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 2

STS Consultants, Ltd.

Date

10/1/02

Technician

Tim O'Brien

Inst. Model

Ludlum 2221

Serial No.

meter #127242Probe #168144

Probe Type:

1"x1" NaI2"x2" NaIShieldedNot Shielded

Lift Elevation

Per EPA

Background

7-8k

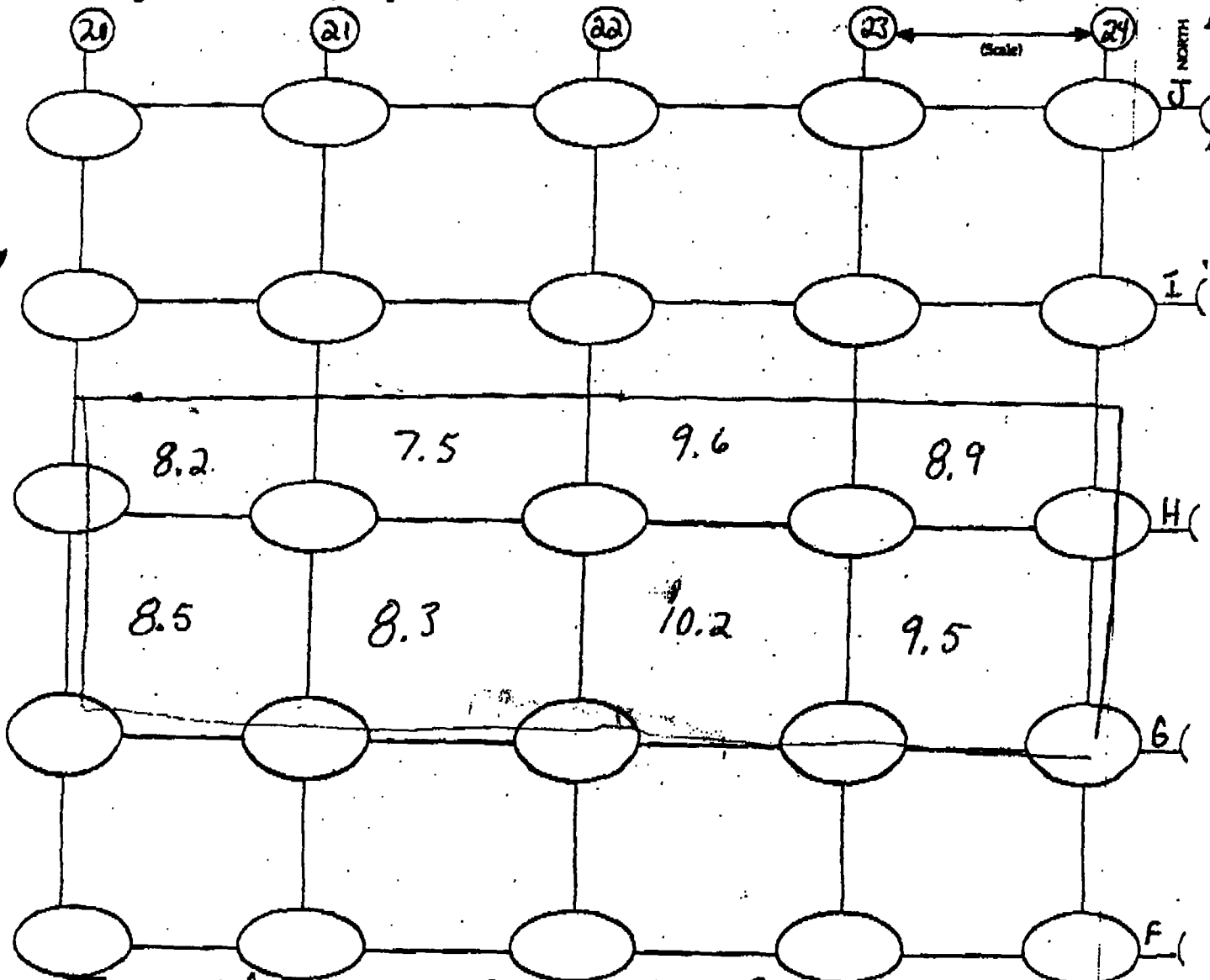
cpm

Action Level

21,072

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP=Other Page

*** = Exclusion zone boundary NE = Not excavated SL = Slope



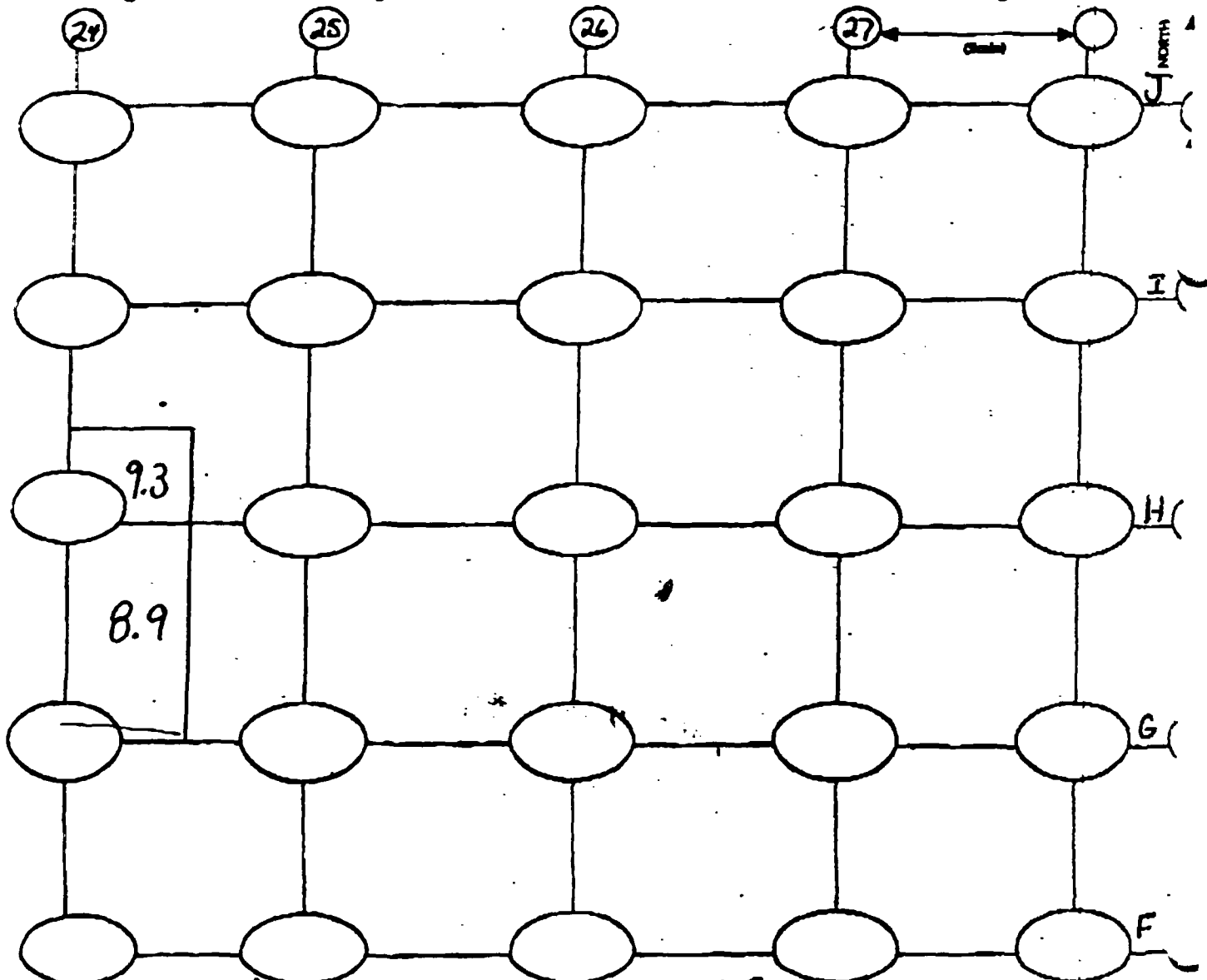
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 2 of 2

STS Consultants, Ltd.

Date 10/1/02Technician Tim O'BrienInst. Model Ludlum 2221Serial No. 127242 / 168144Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation PRE EPABackground 7-8k cpmAction Level 21,072 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excavated as Exclusion Zone OP: Other Page
☐ Exclusion zone boundary NE: Not excavated SL: Slope



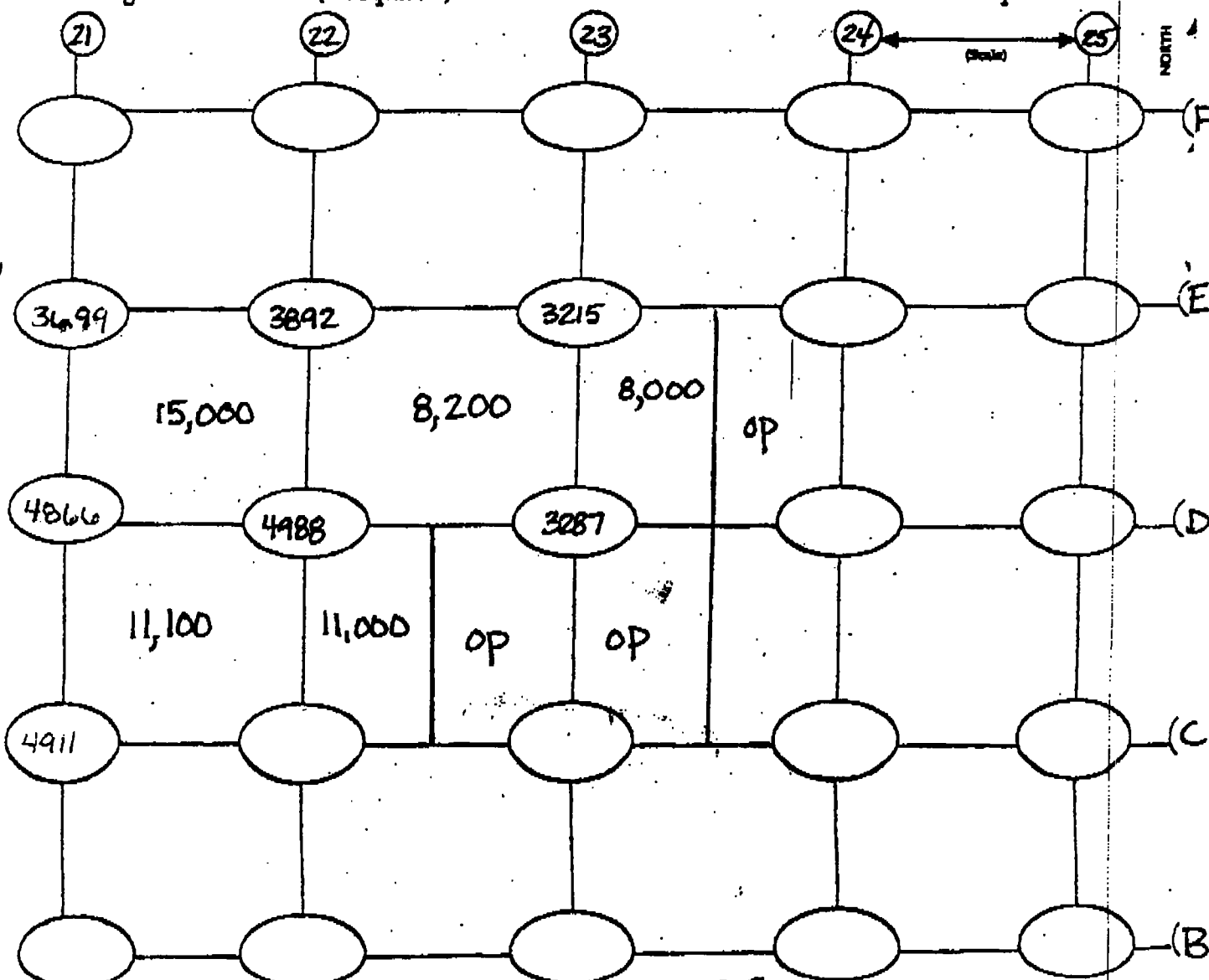
RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 1 of 6

STS Consultants, Ltd.

Date 10/1/02Technician L. AschimInst. Model Ludlum 2221meter # / Probe #
Serial No. 132844 / 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation SurfaceBackground 4-10 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone op = Overexposed
 * = Exclusion zone boundary NE = Not excavated SL = Slope



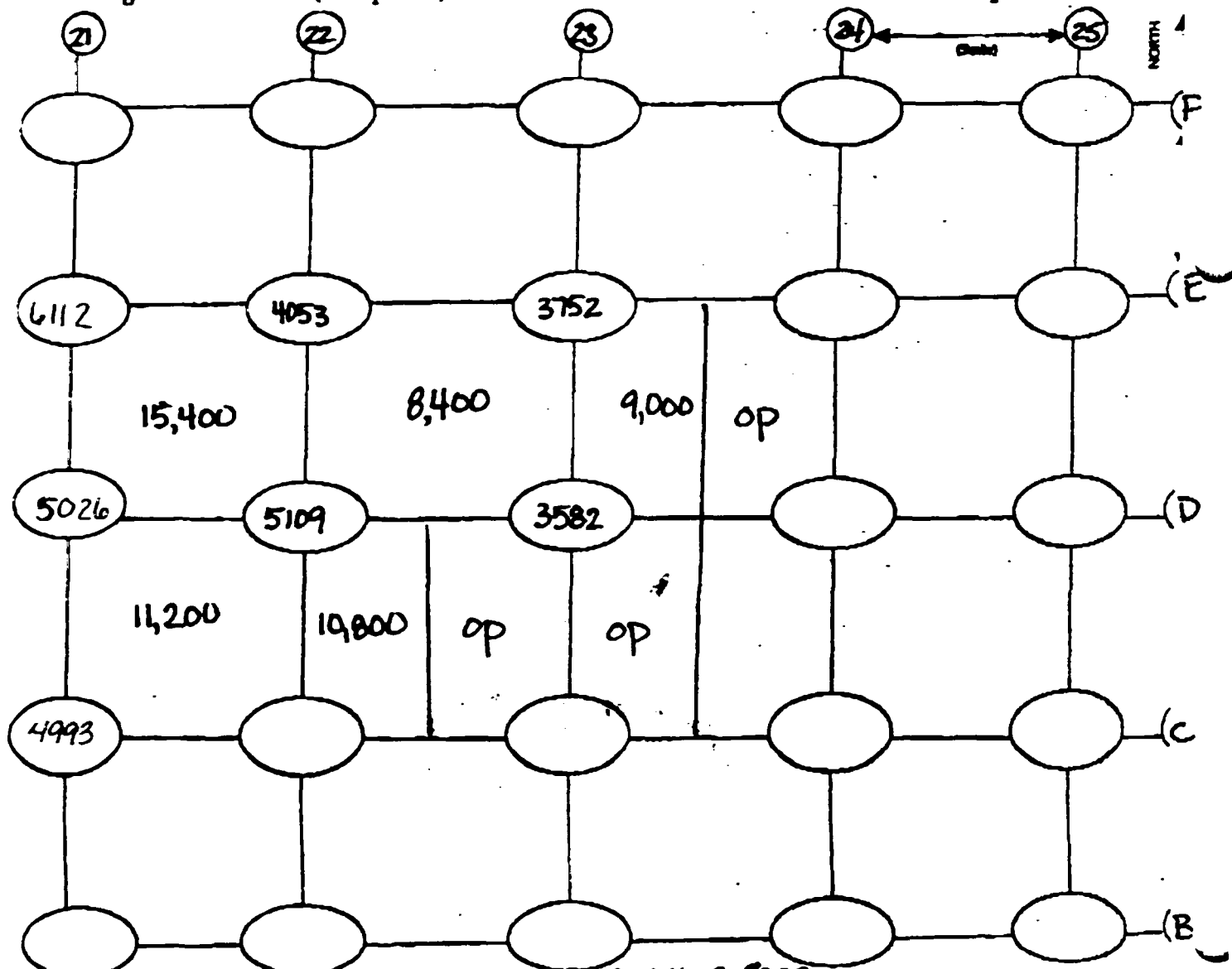
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 2 of 6

STS Consultants, Ltd.

Date 10/1/02Technician L. AschmInst. Model Ludlum 2221meter # 132844 Probe # 16848Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -1.5'Background 4-10 K: cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 * = Exclusion zone boundary NE = Not excavated SL = Slope



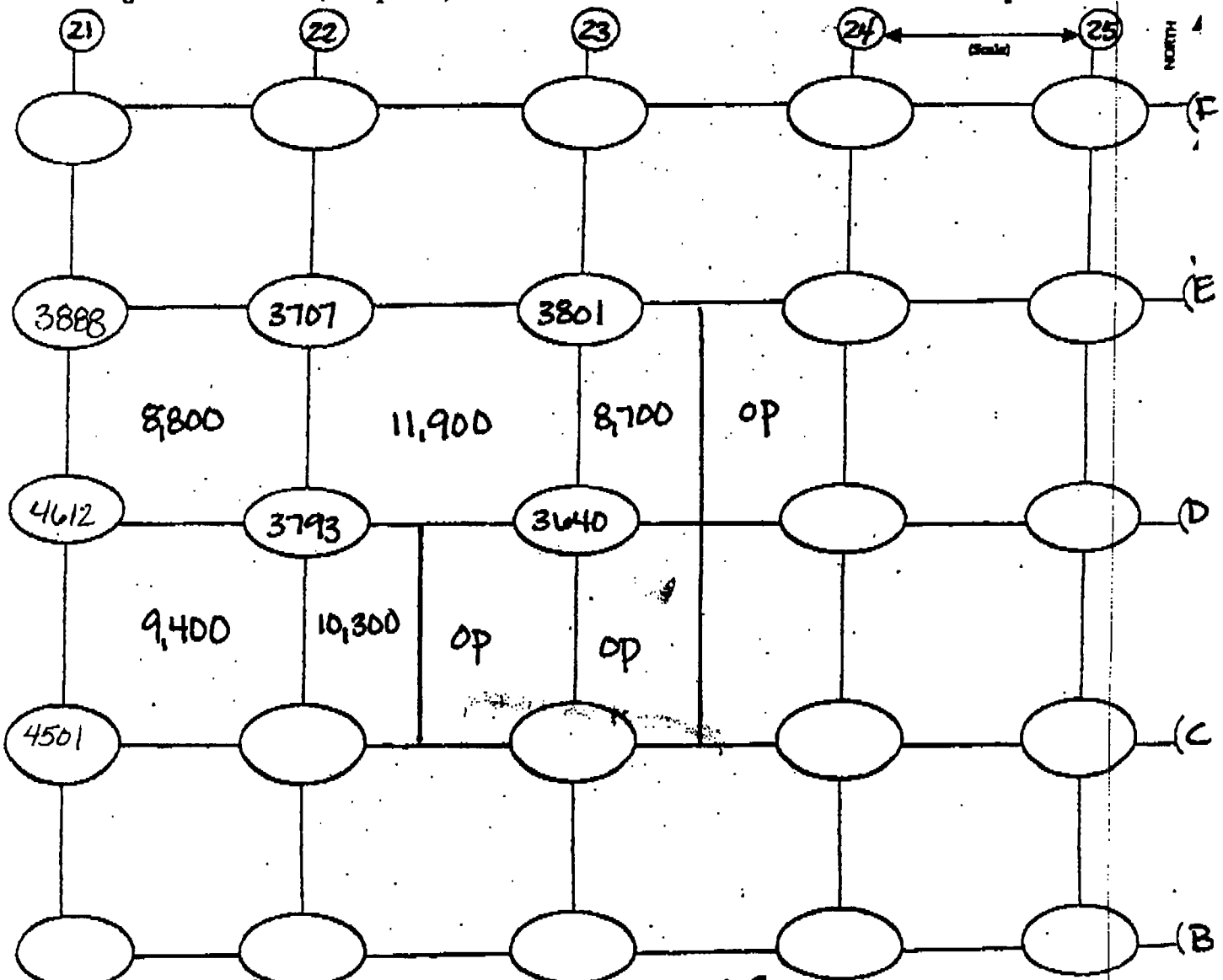
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 3 of 6

STS Consultants, Ltd.

Date 10/1/02Technician L. AschimInst. Model Ludlum 2221meter # / Probe #
Serial No. 132844 / 168148Probe Type: 1'x1" NaI / 2'x2" NaI
Shielded / Not ShieldedLift Elevation -3'Background 4-10 K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone op: other use
 * * * = Exclusion zone boundary NE = Not excavated SL = Slope



RADIATION SURVEY FORM

Project # 25585-XIProject Name GMOPage 4 of 6

STS Consultants Ltd.

Date

10/1/02

Technician

L. Aschim

Inst. Model

Ludlum 2221

Serial No.

meter #

Probe #

132844K6848Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation

-4.5'

Background

4-10

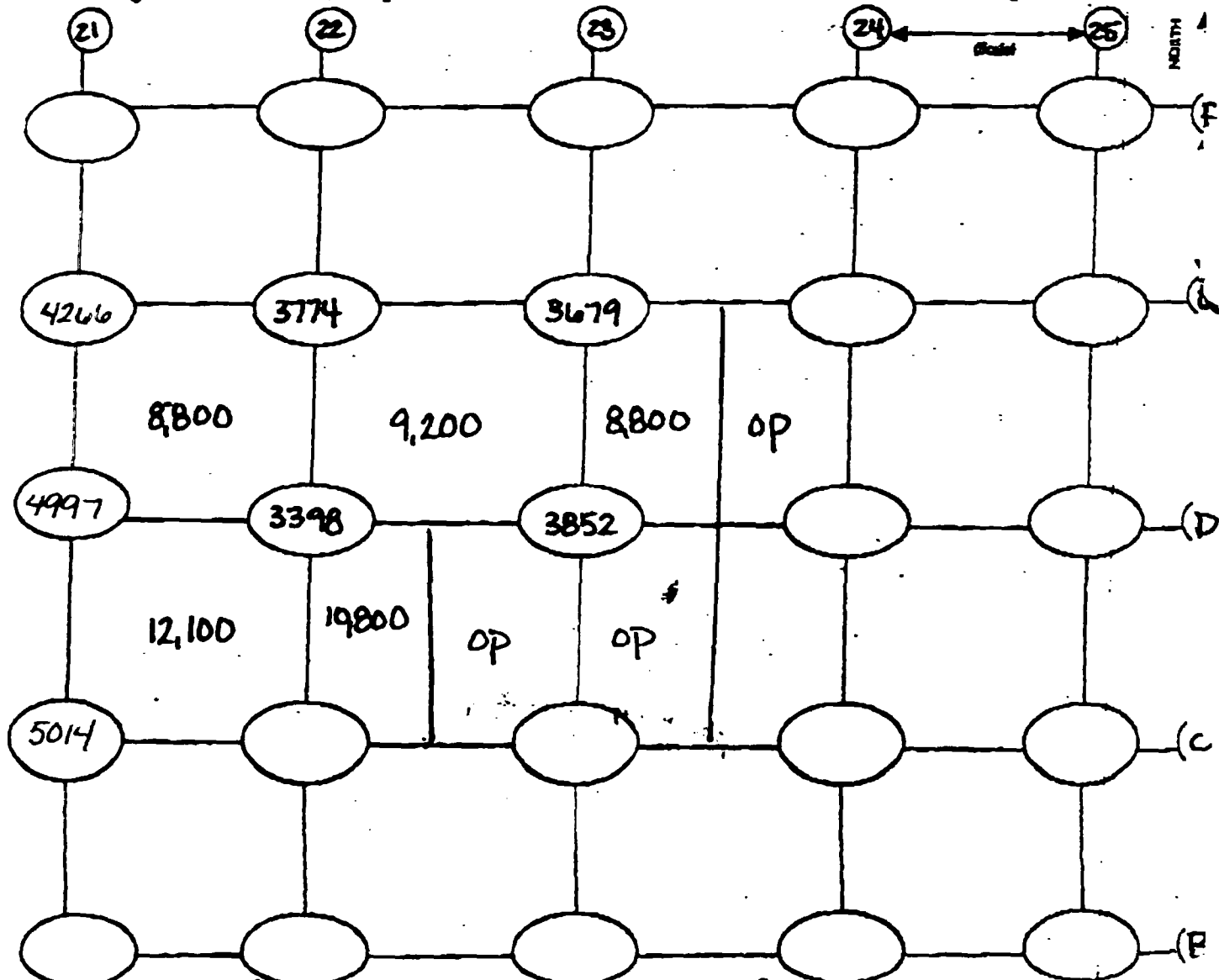
cpm

Action Level

20,909

cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excluded as Exclusion Zone op - Overexposed
 * - Exclusion zone boundary NE = Not excluded SL = Slope



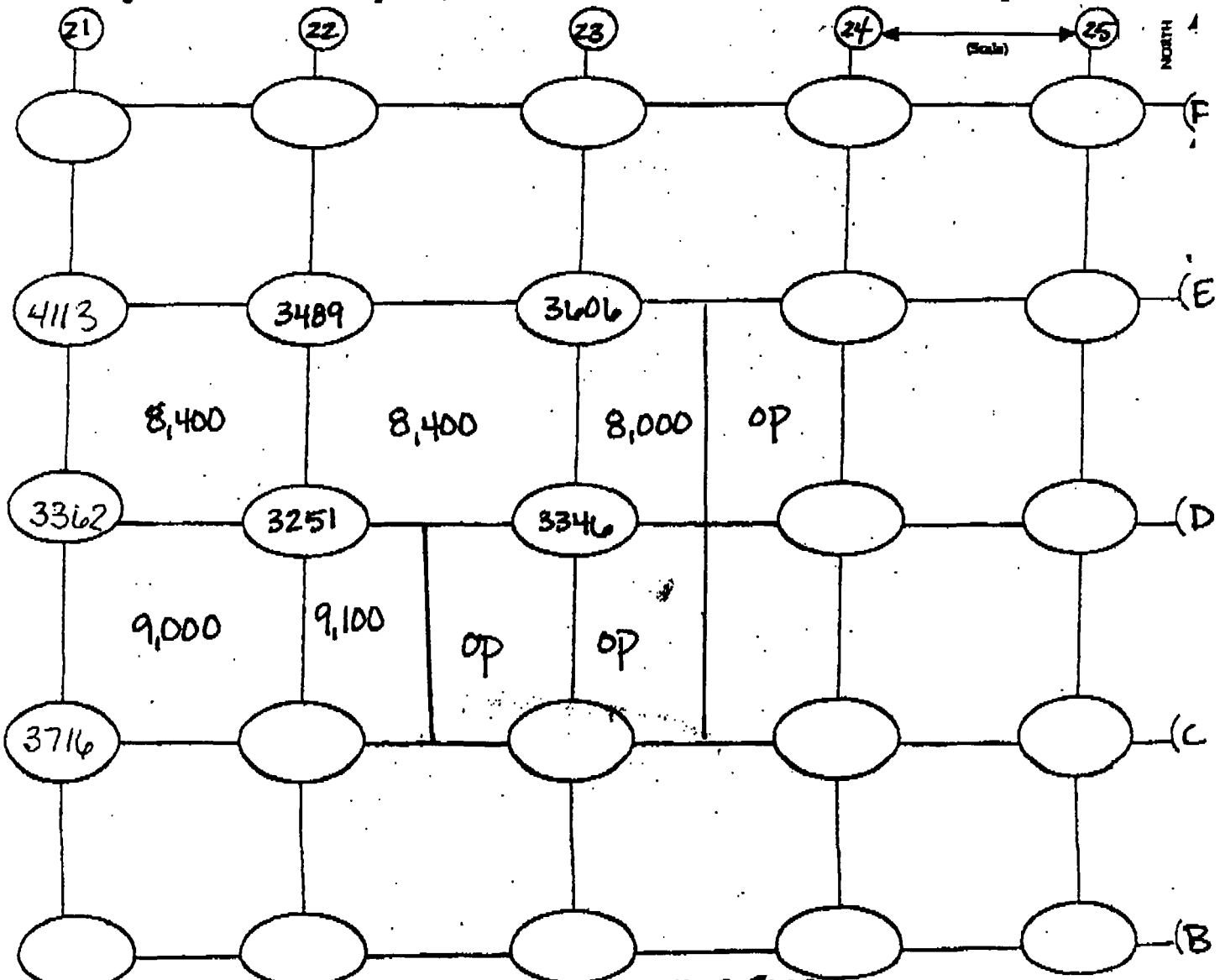
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 5 of 6

STS Consultants, Ltd.

Date 10/1/02Technician L. AschimInst. Model Ludlum 2221Serial No. 132844 / 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -6'Background 4-10K cpmAction Level 20,909 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavated as Exclusion Zone OP = Other Page
 * = Exclusion zone boundary NE = Not excavated SL = Slope



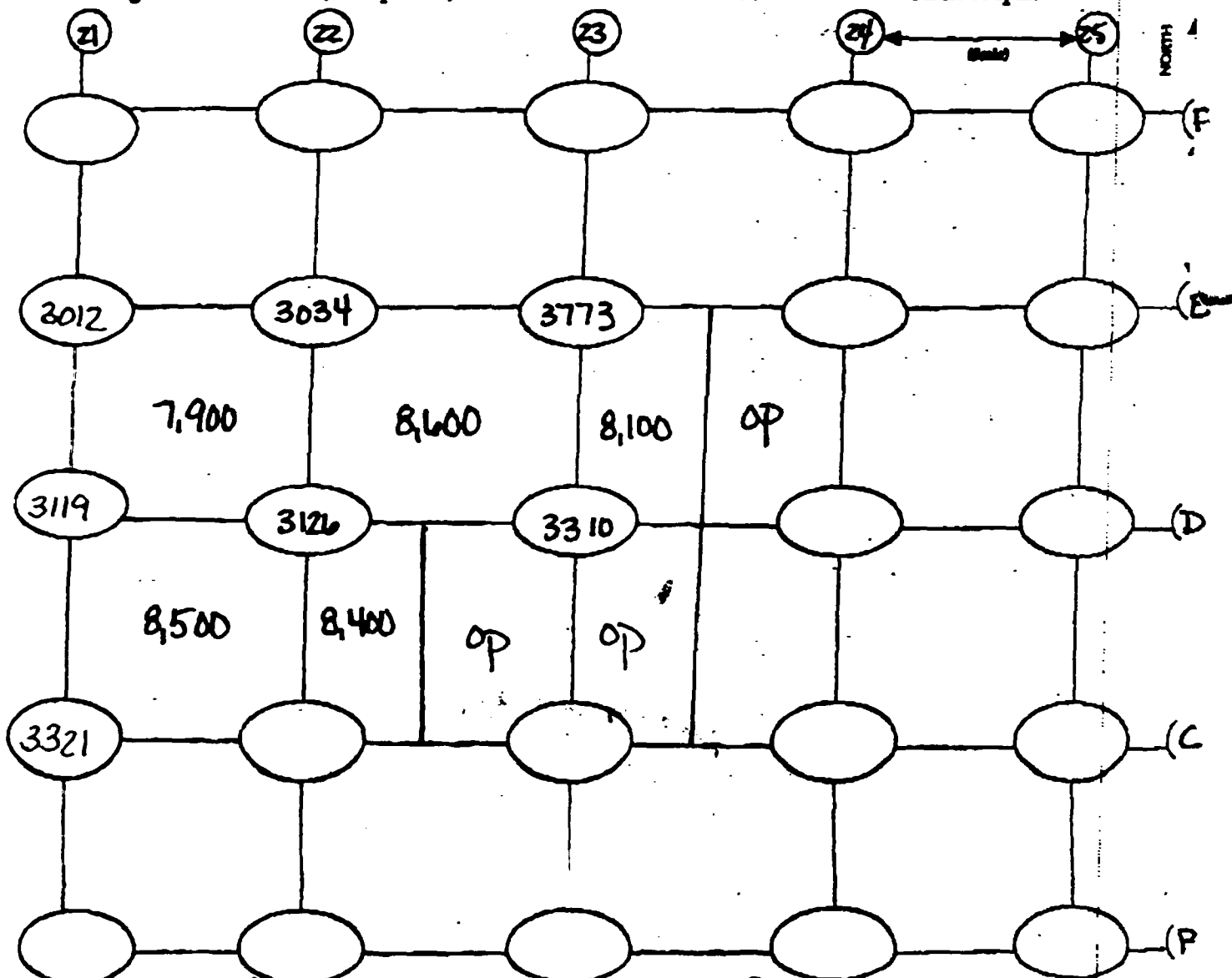
RADIATION SURVEY FORM

Project # 25585-XI Project Name GMO Page 6 of 6

STS Consultants, Ltd.

Date 10/1/02Technician L. AschimInst. Model Ludlum 2221meter # 132844 Probe # 168148Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not ShieldedLift Elevation -7'Background 4-10 K cpm Action Level 20,409 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



☒ Excluded as Exclusion Zone OP = Over Range
 * = Exclusion zone boundary NE = Not excluded SL = Slope

APPENDIX L

Equipment Release Survey Results

314 East Ohio Street Site

[illegible]

RADIATION SURVEY FORM

~~341~~ East Ohio Street Site
341

SURVEY REFERENCE #: 2

DATE OF SURVEY: 6/13/02

NAME OF SURVEYOR: Tim Brown

SURVEY METER IDENTIFICATION:

Mfg: Ludlum

Background Reading: 0.02 mR/hr

Model: 3

Serial: 114750

INSTRUMENT ID:

Mfg: Ludlum

Background Reading: 0.6 cpm

Model: 2200 (scaler) / 43-10 (alpha)

Efficiency: 0.351 %

Serial: 102770 / PR113195

MDA: 8.71 dpm

[illegible]

~~East~~ East Ohio Street Site

[illegible]

~~221~~ East Ohio Street Site
341

[illegible]

East Ohio Street Site
341

[illegible]

RADIATION SURVEY FORM

East Ohio Street Site
341

SURVEY REFERENCE #: 36

DATE OF SURVEY: 9-20-02

NAME OF SURVEYOR: L Smith

SURVEY METER IDENTIFICATION:

Mfg: Ludlum

Background Reading: .02 mR/hr

Model: 3

Serial: 114750

INSTRUMENT ID:

Mfg: Ludlum

Background Reading: , 56 cpm

Model: 2200 (scaler) / 43-10 (alpha)

Efficiency: 0.351

Serial: 102770 / PR113195

MDA: 8.71 dpm

[illegible]

RADIATION SURVEY FORM

East Ohio Street Site

341

SURVEY REFERENCE #: 7

DATE OF SURVEY: 6-21-02

NAME OF SURVEYOR: Tim O'Brien

SURVEY METER IDENTIFICATION:

Mfg: Ludlum

Background Reading: .02 mR/hr

Model: 3

Serial: 114750

INSTRUMENT ID:

Mfg: Ludlum

Background Reading: .5 } cpm

Model: 2200 (scaler) / 43-10 (alpha)

Efficiency: 0.351 ~~SE~~

Serial: 102770 / PR113195

MDA: 8.71 dpm

[illegible]

341

8

6-24-02

EL Smith

Mfg: Ludlum

.02 mR/hr

3

114750

Mfg: Ludlum

.73 cpm

Model: 2200 (scaler) / 43-10 (alpha)

Serial: 102770 / PR113195

dpm

[illegible]

RADIATION SURVEY FORM

314 East Ohio Street Site

SURVEY REFERENCE #: 9

DATE OF SURVEY: 7-1-02

NAME OF SURVEYOR: L Smith

SURVEY METER IDENTIFICATION:

Mfg: Ludlum

Background Reading: .02 mR/hr

Model: 3

Serial: 114750

INSTRUMENT ID:

Mfg: Ludlum

Background Reading: 66 cpm

Model: 2200 (scaler) / 43-10 (alpha)

Efficiency: 0.351

Serial: 102770 / PR113195

MDA: 8.71 dpm

[illegible]

314 East Ohio Street Site

MDA: 8.71 dpm

Serial: 102770 / PR113195

[illegible]

314 East Ohio Street Site

MDA: 8.71 dpm

[illegible]

314 East Ohio Street Site

Serial: 102770 / PR113195

[illegible]

314 East Ohio Street Site

MDA: 8.71 dpm

Serial: 102770 / PR113195

[illegible]

RADIATION SURVEY FORM

314 East Ohio Street Site

SURVEY REFERENCE #: 14

DATE OF SURVEY: 7/19/02

NAME OF SURVEYOR: Glen Huber / Justin Hubbert

SURVEY METER IDENTIFICATION:

Mfg: Ludlum

Background Reading: .02 mR/hr

Model: 3

Serial: 95059

INSTRUMENT ID:

Mfg: Ludlum

Background Reading: 0.73 cpm

Model: 2200 (scaler) / 43-10 (alpha)

Efficiency: 0.351 %

Serial: 102770 / PR113195

MDA: 8.71 dpm

Description (attached sketch if needed) (Area, equipment, vehicle, materials, etc.)	Item #	Gross mR/hr	Gross cpm	dpm per 100 sq. cm
3 Large Concrete Footings & Pillars	1 (1)	.02	1	0.77
from "G" Line in Exclusion Zone.	(2)	.02	1	0.77
	(3)	.02	1	0.77
* All 3 had previous loose contamination	(4)	.02	3	6.47
and were powerwashed clean	(5)	.02	3	6.47
	2 (1)	.02	3	6.47
	(2)	.02	2	3.61
	(3)	.02	1	0.77
	(4)	.02	2	3.61
	(5)	.02	1	0.77
	3 (1)	.02	2	3.61
	(2)	.02	2	3.61
	(3)	.02	1	0.77
	(4)	.02	0	0
	(5)	.02	1	0.77

314 East Ohio Street Site

[illegible]

314 East Ohio Street Site

MDA: 8.71 dpm

[illegible]

314 East Ohio Street Site

[illegible]

314 East Ohio Street Site

Serial: 102770 / PR113195

[illegible]

APPENDIX M

Film Badge Results



STAN A HUBER CON INC
ATTN STAN HUBER
200 N CEDAR ROAD
NEW LENOX IL 60451

LANDAUER®

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425 1586
Telephone: (708)755-7000 Facsimile: (708)755-7016
www.landauerinc.com

3412 Lib. St.
Project
6/02 - 9/02

RADIATION DOSIMETRY REPORT

ACCOUNT NO.	SERIES CODE	ANALYTICAL WORK ORDER	REPORT DATE	DOSIMETER RECEIVED	REPORT TIME IN WORK DAYS	PAGE NO.
67627	NL1	0219740433	07/19/02	07/16/02	3	1 OF 1

PARTICIPANT NUMBER	NAME			DOSIMETER	USE	RADIATION QUALITY	DOSE EQUIVALENT (MREM) FOR PERIODS SHOWN BELOW			QUARTERLY ACCUMULATED DOSE EQUIVALENT (MREM)			YEAR TO DATE DOSE EQUIVALENT (MREM)			LIFETIME DOSE EQUIVALENT (MREM)			RECORDS FOR YEAR	INCEPTION DATE (MM/YY)
	ID NUMBER	BIRTH DATE	SEX				DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE		
FOR MONITORING PERIOD:							06/01/02	06/30/02		QTR 2		2002								
00NL1	CONTROL			P	CNTRL		M	M	M										9	10/78
00134	VISITOR			P	WHBODY		M	M	M	M	M	M	M	18	18	18	8	12/00		
00135	VISITOR			P	WHBODY		M	M	M	M	M	M	M	2	2	3	6	12/00		
00138	VISITOR			P	WHBODY		M	M	M	M	M	M	M	38	38	38	8	12/00		
00139	VISITOR			P	WHBODY		M	M	M	M	M	M	M	18	20	22	6	12/00		
00140	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	12/00		
00141	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	12/00		
00144	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00145	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00148	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00147	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00148	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00149	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00150	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		
00151	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	6	10/01		

M: MINIMAL REPORTING SERVICE OF 1 MREM

QUALITY CONTROL RELEASE: JS

1 - PR 7524 - RPT130 - N1

19733

Accredited by the National Institute of Standards and Technology through

NVLAP*

STAN A HUBER CON INC
ATTN STAN HUBER
200 N CEDAR ROAD

NEW LENOX

IL
60451

LANDAUER, INC. 2 SCIENCE ROAD GLENWOOD, ILLINOIS 60425 - 1586

Telephone: (800) 323-8830

Facsimile: (708) 755-7018

IMPORTANT: WHEN REQUESTING ANY CHANGES, ADDITIONS, OR DELETIONS, PLEASE MAKE THEM ON THIS FORM.
CHANGES TO BE EFFECTIVE FOR YOUR NEXT WEAR DATE
MUST REACH THE GLENWOOD OFFICE NO LATER THAN 06/06/2002
PLEASE DO NOT DUPLICATE CHANGES REQUESTED DURING PRECEDING 30 DAYS.
DO NOT RETURN CHANGE REQUESTS WITH YOUR DOSIMETERS SINCE THIS DELAYS HANDLING.

STANDARD HOLDERS	SPECIAL HOLDERS
0	0

* Holder included.

ACCT. NO.	SERIES	EXPOSURE PERIOD	BADGE DATE
67627	NL1	1 MONTH M	06-01-02

SERIES NAME

NL1

SERVICE CHANGE ORDER

S1812904469 18

DELETE (0)	CHANGE SERIES FROM TO	PARTICIPANT NUMBER	BADGE TYPE	NAME - MAXIMUM OF 34 LETTERS & SPACES	ID NUMBER	SERIAL NUMBER	SEX	BIRTH DATE MO. DAY YEAR
		00NL1	P1	CONTROL		6629856C		
		00134	P1	VISITOR Jim Propekt		6629857C	M	
		00135	P1	VISITOR Jeremiah Chase		6629858C	M	
		00136	P1	VISITOR Robert Schalk not used		6629859C	M	
		00137	P1	VISITOR Roger Gruvin		6629860C	M	

6-11-02
5756-11

SAME 12

S1812904469

67627 NL1

18

DELETE (0)	CHANGE SERIES FROM TO	PARTICIPANT NUMBER	BADGE TYPE	NAME - MAXIMUM OF 34 LETTERS & SPACES	ID NUMBER	SERIAL NUMBER	SEX	
		00138	P1	VISITOR Odell Morgan		6629861C	M	
		00139	P1	VISITOR John Anderson		6629862C	M	
		00140	P1	VISITOR Keith Carlson		6629863C	M	
		00141	P1	VISITOR Tom Cretney		6629864C	M	
		00144	P1	VISITOR Rich Berggren		6629865C	M	
		00145	P1	VISITOR John Esser		6629866C	M	
		00146	P1	VISITOR Dumas Guerin		6629867C	M	
		00147	P1	VISITOR Tim O'Brien		6629868C	M	
		00148	P1	VISITOR Leonard Smith		6629869C	M	
		00149	P1	VISITOR Justin Hybbert		6629870C	M	
		00150	P1	VISITOR Glen Huber		6629871C	M	
		00151	P1	VISITOR not used		6629872C		

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RADIATION DOSIMETRY REPORT

ACCOUNT NO.	SERIES CODE	ANALYTICAL WORK ORDER	REPORT DATE	DOSIMETER RECEIVED	REPORT TIME IN WORK DAYS	PAGE NO.
67627	NL1	0222410192	08/15/02	08/12/02	3	1 OF 1

PARTICIPANT NUMBER	NAME			DOSIMETER	USE	RADIATION QUALITY	DOSE EQUIVALENT (MREM) FOR PERIODS SHOWN BELOW			QUARTERLY ACCUMULATED DOSE EQUIVALENT (MREM)			YEAR TO DATE DOSE EQUIVALENT (MREM)			LIFETIME DOSE EQUIVALENT (MREM)			RECORDS FOR YEAR	INCEPTION DATE (MM/YY)
	ID NUMBER	BIRTH DATE	SEX				DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE		
FOR MONITORING PERIOD:							07/01/02 - 07/31/02			QTR 3			2002							
00NL1	CONTROL			P	CNTRL		M	M	M										10	10/78
00134	VISITOR			P	WHBODY		M	M	M	M	M	M	M	16	16	16	7	12/00		
00135	VISITOR			P	WHBODY		M	M	M	M	M	M	M	2	2	3	7	12/00		
00136	VISITOR			P	WHBODY		M	M	M	M	M	M	M	38	38	38	7	12/00		
00137	VISITOR			P	WHBODY		M	M	M	M	M	M	M	5	4	5	6	12/00		
00138	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	7	12/00		
00139	VISITOR			P	WHBODY		M	M	M	M	M	M	M	18	20	22	7	12/00		
00140	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	7	12/00		
00141	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	12/00	
00144	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00145	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00146	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00147	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00148	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00149	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00150	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	M	7	10/01	
00151	VISITOR			P	CHEST NOTE								M	M	M	M	M	7	10/01	
							UNUSED													

M: MINIMAL REPORTING SERVICE OF 1 MREM

QUALITY CONTROL RELEASE: LMR

1 - PR 7543 - RPT130 - M1

- 22492

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CHANGES TO BE EFFECTIVE FOR YOUR NEXT WEAR DATE

MUST REACH THE OLENWOOD OFFICE NO LATER THAN 07/07/2002

PLEASE DO NOT DUPLICATE CHANGES REQUESTED DURING PRECEDING 20 DAYS.

DO NOT RETURN CHANGE REQUESTS WITH YOUR DOSIMETERS SINCE THIS DELAYS HANDLING.

SPECIAL HOLDERS

F

1

18

* Holder included.

BADGE DATE

07-01-02

NL1

S1816403916 18

18

✓ E 7-269

18

18

[illegible]

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RADIATION DOSIMETRY REPORT

ACCOUNT NO.	SERIES CODE	ANALYTICAL WORK ORDER	REPORT DATE	DOSIMETER RECEIVED	REPORT TIME IN WORK DAYS	PAGE NO.
67627	NL1	0225460036	09/17/02	09/11/02	4	1 OF 1

PARTICIPANT NUMBER	NAME			DOSIMETER	USE	RADIATION QUALITY	DOSE EQUIVALENT (MREM) FOR PERIODS SHOWN BELOW			QUARTERLY ACCUMULATED DOSE EQUIVALENT (MREM)			YEAR TO DATE DOSE EQUIVALENT (MREM)			LIFETIME DOSE EQUIVALENT (MREM)			RECORDS FOR YEAR	INCEPTION DATE (MM/YY)
	ID NUMBER	BIRTH DATE	SEX				DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE		
FOR MONITORING PERIOD							08/01/02 - 08/31/02			QTR 3			2002							
00NL1	CONTROL			P	CNTRL		M	M	M										11	10/78
00134	VISITOR			P	WHBODY		M	M	M	M	M	M	M	18	16	16				12/00
00135	VISITOR			P	WHBODY		M	M	M	M	M	M	M	2	2	3	8	12/00		
00136	VISITOR			P	WHBODY		M	M	M	M	M	M	M	38	34	34				12/00
00139	VISITOR			P	WHBODY		M	M	M	M	M	M	M	18	20	22	8	12/00		
00140	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M				12/00
00141	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	8	12/00		
00144	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M				10/01
00145	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	8	10/01		
00146	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M				10/01
00147	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	8	10/01		
00148	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M				10/01
00150	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M	8	10/01		
00151	VISITOR			P	WHBODY		M	M	M	M	M	M	M	M	M	M				10/01

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QUALITY CONTROL RELEASE: LMR

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CHANGES TO BE EFFECTIVE FOR YOUR NEXT WEAR DATE
MUST REACH THE GLENWOOD OFFICE NO LATER THAN 08/07/2002
PLEASE DO NOT DUPLICATE CHANGES REQUESTED DURING PRECEDING 20 DAYS.
DO NOT RETURN CHANGE REQUESTS WITH YOUR DOSIMETERS SINCE THIS DELAYS HANDLING.

STANDARD
HOLDERS

SPECIAL
HOLDERS

0

0

* Holder included.

ACCT. NO.	SERIES	EXPOSURE PERIOD	BADGE DATE
67627	NL1	1 MONTH M	08-01-02

SERIES NAME

NL1

SERVICE CHANGE ORDER

S2619104105 26

DELETE (D)	CHANGE SERIES FROM TO	PARTICIPANT NUMBER	BADGE TYPE	NAME - MAXIMUM OF 34 LETTERS & SPACES	ID NUMBER	SERIAL NUMBER	SEX	BIRTH DATE MO. DAY YEAR
		X 00NL1	P1	CONTROL		8449973C		
		X 00134	P1	VISITOR Jim Propck		8449974C		
		X 00135	P1	VISITOR Jeremiah Chase		8449975C		
		X 00136	P1	VISITOR Tim Buchler		8449976C		
		00137	P1	VISITOR Roger Gravin		8449977C		

S2619104105

67627 NL1

26

DELETE (D)	CHANGE SERIES FROM TO	PARTICIPANT NUMBER	BADGE TYPE	NAME - MAXIMUM OF 34 LETTERS & SPACES	ID NUMBER	SERIAL NUMBER	SEX	BIRTH DATE MO. DAY YEAR
		00138	P1	VISITOR Odell Morgan		8449978C		
		X 00139	P1	VISITOR John Anderson		8449979C		
		X 00140	P1	VISITOR Keith Carlson		8449980C		
		X 00141	P1	VISITOR Eric Reuscher		8449981C		
		X 00144	P1	VISITOR Rich Berggren		8449982C		
		X 00145	P1	VISITOR Michael Buchler		8449983C		
		X 00146	P1	VISITOR Dumas Guerpier		8449984C		
		X 00147	P1	VISITOR Tim O'Brien		8449985C		
		X 00148	P1	VISITOR Leonard Smith		8449986C		
		00149	P1	VISITOR Justin Hubbert		8449987C		
		X 00150	P1	VISITOR Glen Huber		8449988C		
		X 00151	P1	VISITOR Tony Slings		8449989C	M	

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RADIATION DOSIMETRY REPORT

ACCOUNT NO.	SERIES CODE	ANALYTICAL WORK ORDER	REPORT DATE	DOSIMETER RECEIVED	REPORT TIME IN WORK DAYS	PAGE NO.
67627	NL1	0228860244	10/21/02	10/15/02	4	1 OF 1

PARTICIPANT NUMBER	NAME			DOSIMETER	USE	RADIATION QUALITY	DOSE EQUIVALENT (MREM) FOR PERIODS SHOWN BELOW			QUARTERLY ACCUMULATED DOSE EQUIVALENT (MREM)			YEAR TO DATE DOSE EQUIVALENT (MREM)			LIFETIME DOSE EQUIVALENT (MREM)			RECORDS FOR YEAR	INCEPTION DATE (MM/YY)	
	ID NUMBER	BIRTH DATE	SEX				DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE			
FOR MONITORING PERIOD							09/01/02		09/30/02		QTR 3			2002							
00NL1	CONTROL	P	CNTRL				M		M		M									13	10/78
00134	VISITOR	P	WHBODY				M		M		M		M		M		18				
00136	VISITOR	P	WHBODY				M		M		M		M		M		38	38	36	9	12/00
00137	VISITOR	P	WHBODY				M		M		M		M		M		5				
00138	VISITOR	P	WHBODY				M		M		M		M		M		M	M	1	7	12/00
00139	VISITOR	P	WHBODY				M		M		M		M		M		18				
00140	VISITOR	P	CHEST								M		M		M		M	M		9	12/00
			NOTE				UNUSED														
00141	VISITOR	P	CHEST								M		M		M		M				
			NOTE				UNUSED														
00144	VISITOR	P	WHBODY				M		M		M		M		M		M	M		9	10/01
00145	VISITOR	P	CHEST								M		M		M		M				
			NOTE				UNUSED														
00146	VISITOR	P	WHBODY				M		M		M		M		M		M	M		9	10/01
00147	VISITOR	P	WHBODY				M		M		M		M		M		M				
00148	VISITOR	P	WHBODY				M		M		M		M		M		M	M		9	10/01
00149	VISITOR	P	WHBODY				M		M		13		13		13		13				
00150	VISITOR	P	WHBODY				M		M		M		M		M		M	M		9	10/01
00151	VISITOR	P	CHEST								M		M		M						
			NOTE				UNUSED														

M: MINIMAL REPORTING SERVICE OF 1 MREM

QUALITY CONTROL RELEASE: VG

1 - PR 7589 - RPT130 - N1

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CHANGES TO BE EFFECTIVE FOR YOUR NEXT WEAR DATE

MUST REACH THE OLENWOOD OFFICE NO LATER THAN 09/06/2002

PLEASE DO NOT DUPLICATE CHANGES REQUESTED DURING PRECEDING 72 DAYS.

DO NOT RETURN CHANGE REQUESTS WITH YOUR METER/TERM SINCE THIS DELAYS HANDLING.

STANDARD HOLDERS

SPECIAL HOLDERS

1

•

* Holder included.

ACCT. NO.	SERIES	EXPOSURE PERIOD	BADGE DATE
67627	NL1	1 MONTH M	09-01-02

SERIES NAME

NL1

SERVICE CHANGE ORDER

S1722403953 17

DELETE (D)	CHANGE SERIES FROM TO	PARTICIPANT NUMBER	BADGE TYPE	NAME - MAXIMUM OF 34 LETTERS & SPACES	ID NUMBER	SERIAL NUMBER	SEX	BIRTH DATE MO. DAY YEAR
		00NL1	P1	CONTROL		9183421C		
		00134	P1	VISITOR <i>Jim Probert</i>	<i>✓</i>	9183422C		
		00135	P1	VISITOR <i>Jeremiah Chase</i>	<i>✓</i>	9183423C		
		00136	P1	VISITOR <i>Joe Robert Vednock</i>	<i>✓</i>	9183424C	<i>M</i>	<i>██████</i>
		00137	P1	VISITOR <i>Roger Brown</i>	<i>✓</i>	9183425C		

51722403953

67627 NL1

17

[illegible]

APPENDIX N

Manifests for Shipping of Radiological Materials Delivered by Kerr-McGee to EnviroCare of Utah, Inc.